

3. Through narrative discussion, show reason why the firm believes it is especially qualified to undertake the project. Information provided should include, but not be limited to, such data as: specialized equipment available for this work, any awards or recognition received by a firm or individuals for similar work, required security clearances, special approaches or concepts developed by the firm relevant to this project, etc. Respondents may say anything they wish in support of their qualifications. When appropriate, respondents may supplement this proposal with graphic material and photographs, which best demonstrate design capabilities of the team proposed for this project.
4. All information contained in the form should be current and factual.

Experience Profile Code Numbers (for use with questions 9 and 10)					
001	Abatement	023	Groundwater Sampling and Monitoring	045	Soil Vapor Extraction
002	Aerial Photograph Review	024	Hydrogeological Assessment	046	Surface Water Quality Standards
003	Air Quality Monitoring	025	Interviews	047	System Installation and Start up
004	Air Sparging	026	Investigative Derived Waste Disposal	048	System Operation and Maintenance
005	Archaeological Studies	027	Laboratory Analysis	049	Tier II Evaluation
006	Bioremediation	028	Monitored Natural Attenuation	050	Treatment System - Groundwater
007	Bore Hole Sampling and Logging	029	Monitoring Well Installation - Groundwater	051	Treatment System - Soil
008	Chain of Title Search	030	Monitoring Well Installation – Vadose Zone	052	Treatment System – Surface Water
009	Chemical Oxidation	031	Multi Phase Extraction	053	UST System Closure / Tank Pull
010	Corrective Action Plan Preparation	032	Permitting	054	Well Development
011	Cultural Resource Survey	033	Pilot Testing	200	Site Investigation/Characterization Activities
012	Data Evaluation	034	Pump-and-Treat Remediation	201	Site Remediation Activities
013	Data / Document Management	035	Records / Document Review	202	
014	Dual-Phase Extraction	036	Remedial System Design	203	
015	Environmental Sample Collection	037	Report Preparation	204	
016	Fate and Transport Modeling	038	Research of Legal Description	205	
017	Feasibility Study	039	Risk Assessment – Health/Ecological/Toxicological	206	
018	Free Product Recovery / Removal	040	Site Investigation – Phase I	207	
019	Geologic Mapping	041	Site Investigation – Soil / Groundwater	208	
020	Geophysical Surveys	042	Site Reconnaissance	209	
021	GIS Mapping / Database	043	Soil Boring	210	
022	Groundwater Modeling	044	Soil Testing	211	

1. Date Prepared: January 5, 2006			
2. Firm Name Brown and Caldwell		Business Address and Primary Phone Number 201 East Washington Street, Suite 500 Phoenix, Arizona 85004 (602) 567-4000	
2.1 Submittal is for <input type="checkbox"/> Parent Company <input checked="" type="checkbox"/> Branch or Subsidiary Office			
3. Year Present Firm was Established 1947		4. Specify type of ownership and check below, if applicable. a. Small Business <input type="checkbox"/> b. Small Disadvantaged Business <input type="checkbox"/> c. Women – Owned Business <input type="checkbox"/>	
5. Name of Parent Company, if any: Brown and Caldwell, Walnut Creek		5.1 Former Parent Company Name(s), if any: N/A	
		5.2 Year Parent Company was Established: 1947	
6. Names of not more than two Principals to contact:			
	Name	Title	Telephone Number
1.	Samuel A. Edmondson, P.E., DEE	Senior Vice President	(602) 567-4000
		E-Mail Address:	sedmondson@brwncald.com
2.	Philip J. Lagas, R.G.	Vice President	(602) 567-4000
		E-Mail Address:	plagas@brwncald.com
7. Total Personnel by Discipline: (List each person only once, by primary function)			
36	Administrative	0	Ecologists
0	Archeologists	6	Electrical Engineers
0	Biologists	3	Environmental Engineers
3	Chemical Engineers	11	Geologists
0	Chemists	3	Hydrologists
23	Civil Engineers	0	Landscape Architects
11	Construction Inspectors	3	Mechanical Engineers
8	Draftsmen	1	Risk Assessor
0		0	Sanitary Engineers
0		0	Soils Engineers
0		0	Specifications Writers
0		1	Structural Engineers
0		0	Surveyors
0		0	Toxicologists
0		0	Transportation Engineers
0		0	
147	Total Personnel		
8. Summary of Professional Services Fees Received: (Insert Index Number)			
Last five years (most recent year first)			
	2004	2003	2002
Direct State contract work	7	7	7
All other domestic work	8	8	8
All other foreign work	6	6	6
Ranges of Professional Services Fees "Index"			
1. Less than \$100,000			
2. \$100,000 to \$250,000			
3. \$250,000 to \$500,000			
4. \$500,000 to \$1 Million			
5. \$1 Million to \$2 Million			
6. \$2 Million to \$5 Million			
7. \$5 Million to \$10 Million			
8. \$10 Million or greater			
9. Profile of Firm's Relevant Project Experience			
Profile Code	Number of Projects	Total Gross Fees	Profile Code
1. 039	128	\$12,857	4. 201
2. 053	60	\$2,567	5.
3. 200	3,736	\$174,721	6.

10. Project Examples, Last Five Years							
	Profile Code	"P," "C," "SC," or "IE"	Project Name and Location	Owner Name	Owner Phone Number	Cost of Work	Completion Date (Actual or Estimated)
1.	053	P	Wade Chevrolet, Willcox, AZ	ADEQ: 1110 W. Washington, Phoenix, AZ	(602) 771-4308	\$32,000	2004
2.	200	P	Willcox Equipment, Willcox, AZ	ADEQ: 1110 W. Washington, Phoenix, AZ	(602) 771-4308	\$180,000	2006
3.	201	P	Mustang Service Center, Willcox, AZ	ADEQ: 1110 W. Washington, Phoenix, AZ	(602) 771-4308	\$356,000	2006
4.	201	P	Dunlap Oil Company, Willcox, AZ	ADEQ: 1110 W. Washington, Phoenix, AZ	(602) 771-4308	\$217,000	2005
5.	039	P	Morris Property, Show Low, AZ	ADEQ: 1110 W. Washington, Phoenix, AZ	(602) 771-4308	\$4,600	2005

11. Personnel by discipline: (List each person only once, by primary function.) Enter proposed personnel at the Task Assignment Level on line "A".							
A	A	A	A	A	A	A	A
6	Administrative		Ecologists		Sanitary Engineers	7	Technical Field Staff
	Archeologists		Electrical Engineers		Soils Engineers	17	Environmental Scientist
	Biologists	1	Environmental Engineers		Specifications Writers	1	Health and Safety
	Chemical Engineers	8	Geologists		Structural Engineers		
	Chemists		Hydrologists		Surveyors		
1	Civil Engineers		Landscape Architects		Toxicologists		
	Construction Inspectors		Mechanical Engineers		Transportation Engineers		
3	Draftsmen	1	Risk Assessor			45	Total Personnel

12. All work by firm currently being performed directly for State Agencies. (list not more than 5 projects)						
	a. Project Name and Location	b. Nature of Firm's Responsibility	c. Agency (Responsible Office) Project Managers Name & Phone Number	d. Completion Date (Actual or Estimated)	e. Estimated Cost (In Thousands)	
					Entire Project	Work for Which Firm was/is Responsible
1.	G&K Heber Service, Heber, AZ	Performance of expedited site characterization as part of UST system permanent closure for added cost-effectiveness.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	2006	\$111	\$111
2.	Rock Springs Chevron, Black Canyon City, AZ	A pump/treat system using pneumatic pumps for extraction and air stripper/activated carbon treatment system for conveying the effluent into an infiltration gallery or nearby wash.	ADEQ: 1110 W. Washington, Phoenix, AZ John Robertson (602) 771-4269	2006	\$150	\$150
3.	Willcox Equipment, Willcox, AZ	Site was characterized and an advanced chemical oxidation using ozone has been installed and brought into operation.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	2006	\$180	\$180
4.	Former Alaskan Oil, Humboldt, AZ	Free product recovery using multi-phase extraction and dissolved phase remediation using soil vapor extraction and air sparging.	ADEQ: 1110 W. Washington, Phoenix, AZ John Robertson (602) 771-4269	2007	\$212	\$212
5.	Mustang Service Center, Willcox, AZ	Free product recovery using vacuum enhanced skimming and multi-phase extraction using a combination of soil vapor extraction, extraction using pneumatic pumps, and bio-slurping.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	2006	\$356	\$356

13. Work by firm, which best illustrates current qualifications relevant to this contract. (list not more than 5 projects)

	a. Project Name and Location	b. Nature of Firm's Responsibility	c. Project Owner's Name and Project Managers Name & Phone Number	d. Percent Complete	e. Estimated Cost (In Thousands)	
					Entire Project	Work for Which Firm was/is Responsible
1.	Mary Maudes UST Closure, Heber, AZ	UST closure and site characterization – USTs were removed and site was characterized using push probe to minimize drilling and eliminate derived waste disposal costs. Site was subsequently closed.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	100	\$40	\$40
2.	Willcox Equipment, Willcox, AZ	Site characterization and remediation – Site was characterized and an advanced chemical oxidation using ozone has been installed and brought into operation.	ADEQ: 1110 W. Washington, Phoenix, AZ John Robertson (602) 771-4269	30	\$180	\$180
3.	Rock Springs Chevron, Black Canyon City, AZ	A pump and treat system using pneumatic pumps for extraction and an air stripper/activated carbon treatment system for conveying the effluent into an infiltration gallery or to a nearby wash.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	70	\$212	\$212
4.	Mustang Service Center, Willcox, AZ	Free product recovery using vacuum enhanced skimming and multi-phase extraction using a combination of soil vapor extraction, extraction using pneumatic pumps, and bio-slurping.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	50	\$356	\$356
5.	Morris Property, Show Low, AZ	UST closure site assessment for a previously removed UST using direct push probe to reduce drilling costs and eliminating derived waste costs.	ADEQ: 1110 W. Washington, Phoenix, AZ Mike Latin (602) 771-4308	100	\$4	\$4

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Randy D. Bauer		Title Principal Hydrogeologist	
Personnel Classification/Level (Reference Attachment IV item 16) Professional V		Area of Expertise UST Closure, Site Investigation/Characterization and Remediation	
Proposed Project Role (e.g. Project Manager, Project Engineer, Project Hydrologist, ect.) Project Manager – UST Closure and Site Investigation/Characterization Project Hydrogeologist - Remediation		Education B.S., Geology, New Mexico State University, 1987 M.S., Geology, New Mexico State University, 1989	
Years of Experience 19	Years of Related Experience 19	Registrations and Certifications Held and Year Received Registered Geologist, # 39865, Arizona, 2003 Registered Geologist, # 6811, California, 1998 40-Hour OSHA HAZWOPER, 1991 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour MSHA, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2005	Current
2.	Bryan A. Stirrat & Associates	1991	2005
3.	Leighton & Associates	1989	1991
4.	Teaching/Research Assistant, New Mexico State University	1987	1989
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<p>Executive Summary of Career Highlights</p> <p>Mr. Bauer has 19 years of experience conducting environmental site assessments, subsurface investigations, groundwater monitoring programs, soil and groundwater remediation, and geotechnical investigations at leaking underground storage tank (LUST), industrial hazardous waste and solid waste facilities. His responsibilities have included supervision, planning, and conducting numerous Phase I and Phase II Environmental Site Assessments (ESAs), investigation/characterizations, remediation and underground storage tank (UST) removals. He has planned and directed the drilling and excavation of numerous soil borings, groundwater monitoring wells, and exploratory trenches and test pits. He also directed several hydrogeologic characterizations, including the collection of soil and groundwater samples, vadose zone and groundwater modeling, and interpretation of aquifer tests. Mr. Bauer has prepared several remedial investigation/feasibility study reports and prepared, designed and implemented treatability studies, remedial action plans, and groundwater monitoring programs.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 19 years of experience in the environmental field, Mr. Bauer serves as a senior technical expert who has completed numerous technical evaluations pertaining to UST closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, groundwater monitor well installation, report preparation, geographical information system (GIS) mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, contaminant fate and transport modeling, multi phase extraction, vapor extraction, air sparging, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and, served as project manager who has completed free product removal, groundwater modeling, air permitting, and risk assessments.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Principal Hydrogeologist

Senior project manager for numerous technically and legally complex contaminated sites, including large scale Phase I and II ESAs, ADEQ Voluntary Remediation Program (VRP) characterization and remediation, and large Brownfield Redevelopment projects. Responsible for the preparation and implementation of Sampling and Analyses Plans (SAPs), Quality Assurance Project Plans (QAPPs), Remedial Action Work Plans, and Remedial Action Reports. Responsibilities include: Supervision of geologists, engineers and environmental scientist that conduct investigative and remedial activities for due diligence, VRP, and Brownfield Redevelopment projects; budgeting; marketing; senior technical reviews of environmental project plans and reports; and, interacting with federal, state, and municipal environmental programs.

Bryan A. Stirrat & Associates, Phoenix, Arizona and Diamond Bar, California - Project Manager

Senior Project Manager responsible the characterization and remediation of soil, soil vapor and groundwater contamination at numerous industrial and municipal facilities. Responsibilities included planning, implementation, senior oversight and reporting of numerous Phase I and Phase II ESAs, preliminary assessments and remedial investigation/site characterization projects. Supervised field staff during soil sampling and logging, groundwater sampling, soil vapor sampling, groundwater monitoring wells installation and development, remediation wells installation, soil vapor extraction (SVE) systems installations and start-up, and SVE and air sparge systems installation and start-up. Responsible for the preparation of feasibility studies, design, installation and evaluation of monitoring data from SVE systems, SVE and air sparge systems, groundwater pump and treat systems, bioremediation systems, and soil removal projects. As part of these projects, Mr. Bauer prepared site closure reports, remedial investigation reports, preliminary assessment reports, workplans, and land and water use reports. Responsibilities also included budgeting; marketing; senior technical reviews of environmental project plans and reports; interacting with federal, state, and municipal environmental programs; investigative derived waste management; data management; and, groundwater modeling.

Leighton & Associates, Diamond Bar, California - Geologist

Geologist responsible for the planning, implementation and reporting of numerous geotechnical investigations, feasibility studies and grading projects. Duties included the direct supervision, sampling and logging of numerous soil borings, test pits and fault trenches. Performed local and regional geologic mapping in support of active fault zones and landslides delineation and mitigation studies. Supervised and directed the excavation and removal of landslide debris and other compressible materials until competent bedrock material was exposed prior to certified fill placement.

New Mexico State University, Las Cruces - Teaching/Research Assistant

Responsible for the preparation, implementation and grading of laboratory classes for undergraduate geology courses. Research assistant responsible for the preparation of rock samples for ICP testing. Rock lab technician responsible for the preparation of numerous rock thin-sections for microscopic review.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Steve Brooks		Title Supervising Hydrogeologist	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional V		Area of Expertise Site Investigation/Characterization and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Project Manager – Remediation Project Hydrogeologist – Site Investigation/Characterization		Education B.A., Geology, University of South Florida, 1982 M.S., Hydrology, University of Arizona, 1988	
Years of Experience 20	Years of Related Experience 20	Registrations and Certifications Held and Year Received Registered Geologist, #31649, Arizona, 1997 40-Hour OSHA HAZWOPER, 1988 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour HAZWOPER Managers Training, 1999	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2005	Current
2.	GeoTrans	2001	2005
3.	Golder Associates	1997	2001
4.	Harding Lawson Associates	1988	1997
5.	University of Arizona, Research Scientist	1986	1988
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<p>Executive Summary of Career Highlights</p> <p>Mr. Brooks provides technical oversight, direction and management of water resource and environmental investigations and remediation for mining, municipal and industrial clients throughout the United States. With an academic background in well hydraulics and basin-scale groundwater flow modeling his technical expertise is in the cost-effective characterization of subsurface fluid flow, the fate and transport of contaminants, the design and optimization of well fields, and the completion of feasibility studies and remedial alternatives for contaminated soil and groundwater. This work has also included the design and implementation of a variety of drilling and well testing programs for water supply and contaminated site projects, and the development/use of analytical and numerical models simulating saturated and unsaturated flow and contaminant transport. Over the previous 20 years, his work has included the design, field oversight, testing and/or rehabilitation of over 100 water wells at depths up to 2,000 feet and at pumping rates as high as 3,500 gpm, and significant contributions to the completion of more than 10 remedial investigations and feasibility studies at Water Quality Assurance Revolving Fund Registry and Federal Superfund sites. His leaking underground storage tank (LUST) experience includes the characterization of more than 40 sites across the western U.S. ranging from fractured bedrock in New Mexico and northern Arizona to shallow sands with a rapidly fluctuating water table in Yuma, Arizona. His technical expertise has been in rapidly identifying the scope and level of effort for characterization based on client and regulatory needs and with the application of multiphase models to assist with the evaluation of remedial alternatives. These have included free product recovery, soil vapor extraction (SVE), air sparging, enhanced bioremediation, monitored natural attenuation and dual phase extraction.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With over 20 years of experience, Mr. Brooks serves as a senior technical expert who has completed numerous technical evaluations relating to soil and groundwater site investigations, bore hole sampling and logging, groundwater monitor well installation, report preparation, Geographic Information System (GIS) mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, multi phase extraction, vapor extraction and air sparging; served as a project manager who has completed free product removal; served as the responsible project manager overseeing all aspects of underground storage tank (UST) closures; assisted the project manager in supervising key personnel to complete integral parts of air permitting, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and completed integral parts of environmental activities pertaining to surface water quality standards.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Supervising Hydrogeologist

Serves as the technical and business development leader for the environmental and water resource practices for the Tucson office and coordinates the joint practices for same between the Phoenix and Tucson offices. Primary technical responsibilities include the scoping, conducting, and review of problems in unsaturated and saturated groundwater flow and contaminant transport in alluvial and bedrock settings.

GeoTans, Phoenix and Tucson, Arizona - Senior Hydrogeologist

Provided technical oversight, direction and management of water resource and environmental investigations for mining, municipal and industrial clients throughout the western United States. Responsibilities included the design and implementation of a variety of drilling and well testing programs for water supply and contaminated site projects, and the development/use of analytical and numerical models simulating saturated and unsaturated flow and contaminant transport. Experience included the management of large water resource and environmental projects with complex technical, political, and regulatory issues. Worked on projects for or reviewed by the U.S. Environmental Protection Agency, Regions III, IX, and X, and various regulatory agencies in the states of Arizona, California, Hawaii, New Mexico, Nevada, Washington, Pennsylvania, and New Jersey.

Golder Associates, Tucson, Arizona - Senior Project Manager/Environmental Services Group Manager

As manager of the Tucson office Environmental Group and a Senior Hydrogeologist, Mr. Brooks was responsible for providing technical oversight, direction and management of the hydrogeological aspects of mining, environmental, water resources, and civil construction projects. His technical expertise is in the cost-effective investigation, characterization and remediation of contaminated soil and groundwater, in particular as a manager or member of, teams of multidisciplinary specialists on complex problems. This work includes the design and management of environmental and engineering field investigations, and the application of analytical and numerical models to problems of groundwater and vapor flow, contaminant fate and transport, and well hydraulics in both porous and fractured rock flow systems.

Harding Lawson Associates, Phoenix, Arizona - Senior Hydrogeologist

Promoted from Staff (field) Hydrogeologist to Project and eventually to Senior Hydrogeologist where he served as a principal investigator for the geo-analysis group providing technical oversight on the conceptualization and quantitative analysis of problems in vapor and groundwater flow at contaminated sites. Responsibilities also included the mentoring of junior staff in complex technical issues, and the ability to rapidly identify new technical opportunities and properly prepare or train for them.

University of Arizona, Tucson, Arizona - Research Scientist

As part of a multi-disciplinary team of academic and industry technical experts, evaluated multiple sites across for Arizona for their potential as sites for the Superconducting Super Collider. Primary responsibility was as Project Hydrologist evaluating water supply, land subsidence and water rights requirements.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Jeannie Chang		Title Associate Geologist	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional Level III		Area of Expertise UST Closure, Site Investigation/Characterization and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, etc.)</i> Project Geologist – UST Closure, Site Investigation/Characterization and Remediation		Education B.S., Geology, Dartmouth, 1993 M.S., Geology, Dartmouth, 1996	
Years of Experience 9	Years of Related Experience 9	Registrations and Certifications Held and Year Received Registered Geologist, #41782, Arizona, 2005 40-Hour OSHA HAZWOPER, 1996 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour MSHA, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1998	Current
2.	Basin and Range Hydrogeologists, Inc.	1996	1998
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<p>Executive Summary of Career Highlights</p> <p>Jeannie Chang has nine years experience in the environmental industry. Ms. Chang has in-depth experience overseeing and conducting underground storage tank (UST) closure activities and the characterization and remediation of leaking storage tank (LUST) facilities. Ms. Chang specializes in projects involving technically complex soil and groundwater contamination. She has also been involved in the installation and testing of groundwater wells, interpretation of chemical analyses and hydrogeologic data, well impact assessments, and evaluations of vadose and groundwater models.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With nine years of experience in the environmental industry, Ms. Chang serves as a senior technical expert who has completed numerous senior technical evaluations pertaining to bore hole sampling and logging, groundwater monitor well installation, GIS mapping/database, and sampling and monitoring groundwater; served as project manager who has completed soil and groundwater site investigations and report preparation; served as the responsible project manager overseeing all aspects of UST closures and contaminant fate and transport modeling; assisted the project manager in supervising key personnel to complete integral parts of environmental activities pertaining to surface water quality standards, free product removal, remedial design and installation, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; completed integral parts of pilot testing/studies, multi phase extraction, vapor extraction, air sparging and risk assessments; and assisted on groundwater modeling.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Associate Geologist

Project manager and project geologist responsible for quality assurance/quality control, oversight of UST closure activities, environmental due diligence, investigation and remedial projects, groundwater and surface water investigations, laboratory data analyses, database development, and soil and groundwater investigations. Ms. Chang is responsible for preparing workplans, quality assurance project plans, and reports for investigative and remedial projects. Ms. Chang is also responsible for overseeing technical staff that conducts soil, soil vapor, groundwater and surface water sampling activities.

Basin and Range Hydrogeologists, Inc. , Phoenix, Arizona – Associate Geologist

Associate geologist that conducted UST closure activities and investigative and remedial activities at suspected and confirmed contaminated sites. Responsibilities included: conducting all aspects of site investigations and remedial actions for multi-programmatic sites; scheduling and supervising field activities; collecting soil, soil vapor, surface water, groundwater and air samples; overseeing technical staff responsible for conducting field activities and environmental report preparations; preparing workplans and investigation, remediation and closure report plans for environmentally contaminated sites; and, interacting with federal, state and municipal environmental programs.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Janice Chartier		Title Senior Scientist	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Level III		Area of Expertise Site Investigation/Characterization	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Project Scientist – Site Investigation/Characterization		Education B.S., Environmental Resource Management, Arizona State University, 1981 M.S., Environmental Resource Management, Arizona State University, 1983	
Years of Experience 20	Years of Related Experience 20	Registrations and Certifications Held and Year Received 40-Hour OSHA HAZWOPER, 1989 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour OSHA HAZWOPER Supervisor Training, 1991 8-Hour RCRA Training, 1992 8-Hour MSHA Training, 2005 Certified Environmental Systems Manager (CESM), 2005 HM-126 and HM-181 Department of Transportation (DOT) Health and Safety Training Asbestos Hazardous Emergency Response Act (AHERA) Certified Building Inspector/Management Planner, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell, Phoenix, AZ	1996	Current
2.	Industrial Compliance, Phoenix, AZ	1993	1996
3.	RESNA (formerly Terranext), Phoenix, AZ	1989	1993
4.	Maricopa County Environmental Services, Air Pollution Control Div., Phoenix, AZ	1988	1989
5.	ENSECO Environmental Services Laboratory, Denver, CO	1985	1988
6.	Texas A&M University Agricultural Research Station, El Paso, TX	1983	1984
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Executive Summary of Career Highlights Janice Chartier has 20 years of experience in various phases of environmental research and analysis, including research regarding the interactions of plants, soils, and water, and the impacts of chemicals in the environment. She has experience in sampling vegetation and preparation of reclamation and revegetation plans. She has worked for environmental consulting firms since 1989, with projects involving site assessments, underground storage tank (UST) closures and leaking UST (LUST) investigations, Water Quality and Revolving Fund (WQARF) investigations, remedial investigations and feasibility studies, risk assessments, asbestos inspections and abatement, industrial hygiene, air quality testing and permitting, and emergency response. Ms. Chartier also has previous experience as an Air Pollution Investigator for Maricopa County conducting inspections for compliance and renewal of air quality permits. Her areas of specialized technical expertise include project management, Phase I and II Environmental Site Assessments (ESAs), regulatory compliance and reporting, health and safety, construction project oversight for soil excavation and remediation projects (including landfill removal projects), UST and LUST projects, waste management, stormwater pollution prevention plans, mine reclamation revegetation plans and sampling, and technical writing.			

Brief Resume Continued

Professional Experience and Qualifications:

With 20 years experience various phases of environmental research and analysis, Ms. Chartier serves as a senior technical expert who has completed numerous senior technical evaluations relating to bore hole sampling and logging, sampling and monitoring groundwater, report preparation, geographic information system (GIS) mapping/database, remedial design and installation; served as project manager who has completed soil and groundwater site investigations; served as responsible project manager overseeing all aspects of environmental activities pertaining to surface water quality standards, groundwater modeling and air permitting; assisted the project manager in supervising key personnel to complete integral parts of underground storage tank (UST) closures, pilot testing/studies, risk assessment and in-situ soil treatment; completed integral parts of free product removal; and, assisted on contaminant fate and transport modeling, system operation and maintenance and in-situ groundwater treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Senior Scientist

Project management and scientist services overseeing and coordinating numerous Phase I and II ESAs, and LUST and hazardous waste site investigation activities at numerous locations across the United States. For 5 years, Ms. Chartier has managed and coordinated with various Brown and Caldwell offices throughout the United States to schedule site assessment and Phase II remedial activities on behalf of clients. Ms. Chartier has performed summary reviews of various technical reports and provided brief summaries concerning main issues in the reports for the client. Ms. Chartier conducts approximately 60 to 100 Phase I and II ESAs per year in accordance with ASTM standards, including assessments for the Arizona Department of Transportation (ADOT) and Maricopa County Flood Control. Provided monthly, quarterly and annual reports for status and cost analyses. She has provided environmental compliance assistance for regulatory permits, licenses, registrations, reports and plans as needed when concerns were identified. Ms. Chartier provided project management, budgeting, proposal preparation, site investigations, historical research, soil and water sampling, and subsurface soil investigations (including soil gas surveys). Developed and implemented sampling and work plans, prepared site safety plans and reports, interpreted data, and contacted and negotiated with agencies. Additionally, she has provided oversight of environmental activities including petrochemical and hazardous materials identification, removal of hazardous materials and regulated wastes, waste disposal, and preparation of the final closure report. Ms. Chartier has also prepared storm water management plans for several Arizona National Guard facilities. She has conducted and updated various plans including: Pollution Prevention Plan, Emergency Contingency Plan and Storm Water Pollution Prevention Plan. Ms. Chartier is a Certified Environmental Systems Manager (CESM) and has assisted in the preparation of an Environmental Management Plan for an equipment rental company with facilities across the United States.

Industrial Compliance, Phoenix, Arizona - Environmental Scientist/Project Manager

Ms. Chartier provided waste management services and disposal for investigative derived wastes resulting from the investigations of various WQARF sites for the Arizona Department of Environmental Quality (ADEQ). Wastes usually consisted of water from groundwater investigations and drill cuttings. She was involved in an emergency hazardous materials response team to respond to spills and incidents throughout Arizona. Ms. Chartier assisted in the remediation of hazardous material releases, conducted personal and area air monitoring during responses, and acted as the on-site health and safety officer including coordination of the Fire Department and ADOT response units during incidents along highways and commercial businesses. She conducted numerous Phase I and II ESAs in accordance with ADOT requirements and ASTM standards. Ms. Chartier also prepared all types of permits, reports, and applications, such as air quality permits, storm water permits, best management practices, asbestos management plans, dry well registrations, and UST system registrations. In addition, she assisted in the preparation of risk assessments and feasibility studies for Southern Pacific Railroad.

RESNA Environmental Services, Phoenix, Arizona - Environmental Scientist/Project Manager/Office Health and Safety Officer

Ms. Chartier provided oversight and management for numerous projects involving soil and water sampling, UST closures and LUST investigations, and subsurface soil investigations (including soil gas surveys). She developed and implemented sampling and work plans, prepared site safety plans and reports, interpreted data, and contacted and negotiated with agencies. Ms. Chartier managed a project for ADOT involving the removal of debris from three separate landfills along the Salt River in Tempe, and acted as ADOT's Environmental Representative at the site providing oversight of the contractor's removal activities. In addition, she provided oversight during the removal of hazardous materials encountered during removal of the landfill wastes. Ms. Chartier prepared an air quality permit application and several minor change applications for a printed circuit board manufacturing facility in Chandler. She negotiated with Maricopa County Air Pollution Control Division concerning permit conditions on behalf of a client. Further, Ms. Chartier assisted in conducting site assessments, subsurface investigations, LUST investigations, risk assessments and feasibility studies.

Maricopa County Environmental Services, Air Pollution Control Division, Phoenix, Arizona - Inspector II

Ms. Chartier conducted facility inspections for compliance with air quality permits for all types of commercial and industrial sources in the Phoenix Metropolitan Area. She was responsible for investigating numerous types of facilities such as gasoline service stations, circuit board manufacturing facilities, styrofoam cup manufacturing facilities and construction sites for dust control. She issued notices of violations as well as citations when violations were identified. She also assisted facilities in obtaining air pollution control permits.

ENSECO Environmental Services Laboratory, Denver, Colorado - Quality Assurance/Quality Control Scientist

Ms. Chartier worked for an environmental testing laboratory in the quality assurance department. She set up and established the standards preparation laboratory and developed the QA/AC program for standards used in the various analyses. The laboratory participated in the Contract Laboratory Program and Ms. Chartier prepared the standards used when the laboratory was recertifying their test methods.

Texas A&M Research Station, El Paso, Texas – Assistant Professor

Ms. Chartier conducted research and analysis involving salt tolerance in agricultural crops. She conducted infiltration studies and field studies and various laboratory analyses for research studies. In addition, she managed six employees in the field and laboratory.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Darren J. Curtis		Title Geologist I	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional Level III		Area of Expertise UST Closure, Site Investigation/Characterization, and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Project Geologist – UST Closure, Site Investigation/Characterization, and Remediation		Education B.S., Geology, Northern Arizona University, 1994	
Years of Experience 11	Years of Related Experience 11	Registrations and Certifications Held and Year Received Geologist-in-Training, #07546, Arizona, 1998 40-Hour OSHA HAZWOPER, 1994 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour OSHA HAZWOPER Manager, 1997 8-Hour MSHA, 2004 AHERA Contractor/Supervisor, 2005 AHERA Inspector/Sampler, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2004	Current
2.	Klienfelder	2000	2003
3.	Golden Environmental Management	1998	2000
4.	Environmental Evaluation Services	1997	1998
5.	Enecotech Environmental Consultants	1994	1997
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<p>Executive Summary of Career Highlights</p> <p>Darren Curtis has 11 years of experience in the environmental geology field. His areas of expertise include underground storage tank (UST) closure activities, subsurface contaminant investigations, soil sampling, soil logging, groundwater/vadose zone well installation, groundwater quality monitoring/sampling, and heavy equipment operation. He has served as a project manager and project geologist on multiple remediation projects involving hydrocarbon contamination problems at service stations, tank farms, terminals, maintenance yards, boat marinas, public schools, airports, army bases, mines, and farms. Mr. Curtis has also overseen the installation of numerous groundwater monitoring wells at service stations to monitor product migration and contaminant concentrations. Mr. Curtis has gained a lot of experience in the last year working on a large redevelopment project for the City of Tempe in a Brownfields area next to the Salt River. Mr. Curtis has been responsible for overseeing contractors who are removing building structures. Once the building structures have been removed, Mr. Curtis has been responsible for evaluating the properties, and looking for recognized environmental conditions. Numerous subsurface structures such as USTs, septic tanks, sumps, truckscalls, dry wells, oil water separators and hydraulic lifts have been identified and removed. Mr. Curtis has been responsible for soil sample collection activities in order to define the full extent and degree of vadose zone contamination.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 11 years of experience in the environmental geology field, Mr. Curtis serves as a senior technical expert who has completed numerous senior technical evaluations relating to bore hole sampling and logging, and sampling and monitoring groundwater; served as a project manager who has completed groundwater monitor well installations; assisted the project manager in supervising key personnel to complete integral parts of soil and groundwater site investigations, report preparation, pilot testing/studies, remedial design and installation; completed integral parts of underground storage tank (UST) closures, environmental activities pertaining to surface water quality standards, free product removal, contaminant fate and transport modeling, air permitting, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and assisted on vapor extraction.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Geologist I

Project geologist responsible for overseeing numerous environmental field investigations and assisting the project manager in preparing associated workplans and reporting requirements. Mr. Curtis is responsible for: overseeing technical staff that conduct soil, soil vapor, surface water, and groundwater sampling activities; remedial system installations; monitoring well installations; well testing; and, assisting project managers with the preparation of site closure reports and remedial investigation reports.

Klienfelder, Phoenix, Arizona - Staff Geologist

Staff geologist responsible for conducting numerous soil boring logging and sampling operations to define the full extent and degree of vadose zone contamination resulting from gas stations across the southwest. Mr. Curtis was also responsible for conducting operation and maintenance activities on several thermal oxidation and air sparging remediation systems in the Phoenix metropolitan area.

Golden Environmental Management, Tempe Arizona - Project Geologist

Project Geologist responsible for conducting environmental sampling and remedial activities at several major open pit copper mines located in Arizona. Responsibilities included overseeing technical staff that collected soil, groundwater and surface water sampling activities. Mr. Curtis also conducted site wide asbestos surveys, oversaw asbestos abatement contractors, and collected project data for closure reports.

Environmental Evaluation Services, Phoenix Arizona - Geologist

Staff Geologist responsible for conducting numerous soil boring logging and sampling operations to define the full extent and degree of vadose zone contamination resulting from gas stations across the southwest. Mr. Curtis also participated in the design and implementation of several bioremediation cleanup projects at resorts along the Colorado River.

Enecotech Environmental Consultants, Phoenix, Arizona - Geologist

Staff Geologist responsible for conducting numerous soil boring logging and sampling operations to define the full extent and degree of contamination resulting from gas stations across the southwest. Mr. Curtis also participated in conducting numerous Phase I and Phase II Environmental Site Assessments, and asbestos surveys across the southwest.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Pejman Eshraghi, P.E.		Title Principal Engineer	
Personnel Classification/Level (Reference Attachment IV item 16) Professional Level V		Area of Expertise UST Closure, Site Investigation/Characterization and Remediation	
Proposed Project Role (e.g. Project Manager, Project Engineer, Project Hydrologist, ect.) Project Manager – UST Closure and Remediation Project Engineer – Site Investigation/Characterization		Education B.S., Nuclear Engineering, Arizona State University, 1993	
Years of Experience 12	Years of Related Experience 12	Registrations and Certifications Held and Year Received Civil Engineer, #34771, Arizona, 2000 40-Hour OSHA HAZWOPER , 1993 8-Hour OSHA HAZWOPER Refresher, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2004	Current
2.	ADEQ	1993	2004
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<p>Executive Summary of Career Highlights</p> <p>Pejman Eshraghi has more than 12 years of environmental regulatory experience. Mr. Eshraghi is currently serving as a member of the State of Arizona's Underground Storage Tank (UST) Technical Appeals Panel – a panel selected by the Governor. He has extensive experience with inspection of USTs for closure, installation, and upgrades; reviewing technical documents, including work plans for site investigations and cleanups, site characterization reports, corrective action plans (CAPs), and closure reports associated with UST sites. Mr. Eshraghi has performed soil and groundwater remediation, site assessments, work associated with the preparation of an Aquifer Protection Permits to close a mine, work associated with reduction of total maximum daily load of copper into an impaired stream resulting from mining operations, area-wide soil, surface and groundwater investigations on public and private lands such as the Willcox Groundwater Remediation, the Gibson Mine Closure, Prescott Mining Project, the Upper Gila River Best Management Practices Study, and the Lake Havasu City Groundwater Investigation. His responsibilities included scheduling of field activities, coordinating with sub-contactors, performing field activities, managing field personnel, preparing reports, and overall project management. Mr. Eshraghi's versatility in application of federal and state laws has enabled him to serve as expert witness in technical and administrative hearings on cases brought before the Office of Administrative Hearings and the Superior Court.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With over 12 years of environmental regulatory experience, Mr. Eshraghi serves as a senior technical expert who has completed numerous senior technical evaluations pertaining to UST closures, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installations, report preparation, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and, served as project manager who has completed environmental activities pertaining to surface water quality standards, geographic information system (GIS) mapping/database, air permitting, multi phase extraction, vapor extraction, air sparging and risk assessments.

Work Experience:

Brown and Caldwell, Phoenix, Arizona – Principal Engineer

Mr. Eshraghi is responsible for direct administrative and technical oversight of entry to senior level technicians as well as entry to mid-level geologists and engineers. He is responsible for scheduling of field activities conducted within the Phoenix Environmental Services Group. Mr. Eshraghi also manages numerous environmental site assessments, characterization, and remediation projects involving complex contaminated sites. His responsibilities include: development of work plans, quality assurance project plans, sampling plans, and health and safety plans; aquifer protection permitting; soil and groundwater remediation through the application of soil vapor extraction, air sparging, ozone sparging, bioventing, biosparging, pump and treat, and remedial excavation; site decommissioning and closure; waste management; soil investigation; groundwater monitoring; groundwater modeling; site restoration; UST closure; and regulatory agency negotiations.

Arizona Department of Environmental Quality, Phoenix, Arizona - UST Technical Support Unit, Manager

Managed a work unit of technical staff responsible for determining the presence of UST releases to the environment, eligibility of UST releases for closure, reviewing technical documents including work plans for site investigation, and cleanup, site characterization reports, CAPs, and site closure reports. Served as the primary contact in all administrative appeals for the UST Corrective Action Section. In addition, Mr. Eshraghi served as an expert witness on behalf of the Arizona Department of Environmental Quality in administrative hearings. He was responsible for training new staff in the application of laws relating to investigation and cleanup of soil, groundwater, and surface water.

Arizona Department of Environmental Quality, Phoenix, Arizona - UST Claims Review Unit, Manager

Managed a work unit of senior hydrologists responsible for reviewing technical claims against the State Assurance Fund for investigation and cleanup of soil, groundwater, and surface water. Served as expert witness on behalf of the Agency in administrative hearings. He was responsible for training new staff in the application of laws relating to investigation and cleanup of soil, groundwater, and surface water.

Arizona Department of Environmental Quality, Phoenix, Arizona - UST Inspections and Compliance Unit, Engineer

Reviewed plans and budgets to install safeguards against corrosion, spills, and overfills on USTs. Supported inspectors and compliance officers in interpretation of technical codes of practices and their application in enforcement of Federal and State laws. Investigated the work of contractors and engineers, and made technical determinations on their projects involving designing and installing engineered safeguards to meet UST technical requirements.

Arizona Department of Environmental Quality, Phoenix, Arizona - Water Quality Assessment Unit, Hydrologist II

Served as the project hydrologist for the Lake Havasu groundwater investigation focusing on contamination of lake and municipal wells by point and non-point sources of contamination from golf courses, wastewater treatment plants, and residential and industrial septic tanks. Assisted the attorneys to investigate contamination threatening surface and groundwater of Lake Havasu City. Served as support hydrologist for several surface and groundwater investigations involving Federal and state agencies such as U.S. Department of Air Force, U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Bureau of Mines, and Cities of Tucson and Safford.

Arizona Department of Environmental Quality, Phoenix, Arizona - Groundwater Hydrology Unit, Intern

Served as support staff assisting hydrologists in performing statewide groundwater investigations. Prepared sampling plans and maps for various groundwater projects.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual John S. Kim, CEM		Title Managing Scientist	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Professional Level VI		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization, and Remediation	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Program Manager		Education B.S., Mechanical Engineering, University of Illinois, 1983	
Years of Experience 22	Years of Related Experience 22	Registrations and Certifications Held and Year Received Certified Environmental Manager, 1993 40-Hour OSHA HAZWOPER Certification 1992 8-Hour OSHA HAZWOPER Refresher, 2005 ADEQ Certified Grade 2 Wastewater Treatment Plant Operator, 2002	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2004	Current
2.	Mactec, Inc. (formerly Environmental Science and Engineering, Inc.)	1992	2004
3.	Bechtel Environmental, Inc	1988	1992
4.	U.S. Environmental Project Agency, Region VI	1984	1988
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<p>Executive Summary of Career Highlights</p> <p>John Kim has 22 years of experience in the environmental engineering field and has extensive knowledge of Title 49 of the Arizona Revised Statutes, Title 18 of the Arizona Administrative Code as well as Title 40 of the Code of Federal Regulations (CFR). He has extensive project management and technical oversight experience for all types of preliminary assessment, investigation and remediation projects under Water Quality Assurance Revolving Fund (WQARF), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), Resource Conservation and Recovery Act (RCRA) Corrective Action, Underground Storage Tank (UST) Corrective Action, and Brownfields Programs. Mr. Kim has also managed and provided technical oversight on a variety of other environmental related projects involving regulatory evaluations; regulatory agency negotiations; permitting; data management and validation; hazardous waste management/minimization; pollution prevention plans; contingency and emergence response plans; facility closure and decommissioning; compliance audits; property transaction due diligence (i.e., Phase I, II, and III); wastewater treatment system evaluations; storm water pollution prevention plans (SWPPPs) and discharge monitoring plans (MPs); air emission inventories; and spill prevention, countermeasure, and control (SPCC) plans. In his earlier years, Mr. Kim coordinated and supervised all type of field activities including but not limited to: soil and groundwater sampling; soil vapor sampling; well installations; treatability studies/pilot testing; remedial system installations and operations; UST removal; and site decommissioning.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 22 years of experience in the environmental engineering field, Mr. Kim serves as a senior technical expert who has completed numerous senior technical evaluations relating to UST closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installation, report preparation, GIS mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, air permitting, multi phase extraction, vapor extraction, air sparging, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Managing Scientist

Mr. Kim is responsible for direct administrative and technical oversight of entry to senior level technicians, scientists, geologists, and engineers. He is the Quality Assurance/Quality Control coordinator for the Phoenix Environmental Services Group which includes quality assurance planning, and developing and implementing standard operating procedures consistent with Federal and State rules, regulations, policies and guidance. Mr. Kim is also responsible for conducting technical reviews of all environmental reports, plans, data, contracts, task orders, and proposals before they can be submitted to clients and/or subcontractors. Mr. Kim also manages highly sensitive and visible environmental projects including the Camp Navajo Closure project administered through the Arizona Army National Guard that encompasses a wide variety of activities including: development of work plans, field sampling plans (FSP), quality assurance project plans (QAPP), and health and safety plans (HASP); PAs; RI/FS; record of decisions; RCRA permitting; RCRA closure; remedial action; site decommissioning and closure; waste management, risk assessment; soil investigation; groundwater monitoring; groundwater modeling; cultural resources evaluation; biological evaluation; site restoration; UST closure; community relations and public participation coordination; unexploded ordinance (UXO) investigation and disposal; and regulatory agency negotiations.

MACTEC, Inc., Phoenix, Arizona - Environmental Services Department Manager and Principal Scientist

Mr. Kim was responsible for direct administrative and technical oversight of entry to senior level technicians, scientists, geologists, and engineers within Environmental Services Department. He was also responsible for conducting technical reviews of all environmental reports, plans, data, contracts, task orders, and proposals before they were submitted to clients and/or subcontractors. Mr. Kim was also the Contract Manager for the State A7-0098 and WQARF contracts, and the Client Manager for Federal Projects. During his tenure with this company Mr. Kim managed a variety environmental projects for private industry, local and State and Federal agencies involving all of the activities summarized in the "Professional Experience and Qualifications" above, as well as experience with SPCC plans, SWPPPs, storm water retention plans, storm water discharge MPs, Title V air permitting, aquifer protection permitting, RCRA permitting, air emissions inventory, CERCLA five year reviews, hazardous waste secondary containment system evaluation and design, wastewater treatment system evaluation, SARA Title III compliance, risk assessments, SAF applications, facility waste stream evaluation and cost/benefit analyses; hazardous waste drum assessment and removal; and landfill investigation and design.

Bechtel Environmental, Inc., Houston, Texas - Regulatory Compliance Group Supervisor and Senior Environmental Engineer

Mr. Kim supervised entry to mid level scientists, geologists, and engineers within Regulatory Compliance Group and was primarily responsible in providing all environmental regulatory and permitting services to multi-million dollar projects associated with petrochemical facilities and petroleum refineries. On these types of projects, Mr. Kim interfaced with the regulatory group and coordinated with Bechtel and client project and task managers to identify and obtain all environmental permits associate with new and/or upgrading facilities, and provided specific design criteria to comply with regulatory standards for a specific unit or process. Mr. Kim also managed facility-wide regulatory compliance, refinery/petrochemical sewer segregation and wastewater treatment upgrades, and closure projects that involved the following activities: development and implementation of investigative work plans, FSPs, QAPPs, and HASPs, treatability study work plans, regulatory compliance plans, and closure plans; implementation and oversight of field soil and groundwater investigations and remediation field activities; performance of facility/corporate wide environmental compliance audits; and on-site regulatory coordination at applicable petrochemical and petroleum refineries. Other activities included development of RI/FS work plans for Superfund Sites, preparation of NPDES permits for commercial disposal facilities, and performing nation wide compliance audits at former uranium processing sites that were previously owned or operated by the Department of Energy under the FUSRAP program.

U.S. Environmental Protection Agency, Region VI, Dallas, Texas - Unit Leader and Environmental Engineer

Mr. Kim served as a unit leader and permit writer for the Hazardous Waste Permits Section and was responsible for first line supervision of EPA staff permit writers, and management of 30 land disposal facilities in Texas and Oklahoma undergoing RCRA permitting or Closure. As part of this responsibility, he reviewed all pertinent site information, process descriptions, and designs to ensure that it conformed to the RCRA permit requirements; conducted and prepared RCRA facility assessments; conducted RCRA compliance inspections at the facilities; and coordinated the permitting process with the Texas and Oklahoma State Agencies. Mr. Kim was also designated as the EPA Regional expert for design of hazardous waste surface impoundments, landfills, container storage facilities, and tank systems conducting technical evaluations of the design and operation of these types of units; and managing the new UST program for the region. As an EPA regional technical expert, Mr. Kim participated in several presentations and workshops to the regulated community regarding design and permitting issues associated with the aforementioned units, and provided a status of the UST program to Congressmen and Senators representing the Region VI states.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Tekla King, R.G.		Title Associate	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional IV		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Quality Assurance Program Manager and Senior Technical Reviewer		Education B.S., Geology, University of Utah, 1994	
Years of Experience 10	Years of Related Experience 10	Registrations and Certifications Held and Year Received Registered Geologist, #37751, Arizona, 2002 40-Hour OSHA HAZWOPER, 1995 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour MSHA, 2004	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1995	Current
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<p>Executive Summary of Career Highlights</p> <p>Tekla King has 10 years experience in surface and groundwater permitting, regulatory compliance, hydrogeologic investigations, and strategic environmental management supported by a strong academic background in hydrogeology, aqueous geochemistry isotope investigations, and technical writing. Ms. King has conducted a number of environmental and groundwater resource investigations, including projects related to the installation and testing of wells, water resource investigations, well feasibility investigations, Phase I and II Environmental Site Assessments (ESAs), remedial investigation and feasibility studies and remedial system design and installation. Ms. King serves on Arizona Department of Environmental Quality (ADEQ) rulemaking stakeholder committees associated with the Aquifer Protection Permit (APP) and Arizona Pollution Discharge Elimination System (AZPDES) programs, and is involved with supporting ADEQ in the implementation of the voluntary Capacity, Management, Operations and Maintenance (CMOM) program. Ms. King currently serves as the Phoenix environmental services manager and provides senior review and technical oversight on various projects associated with transactional due diligence, site characterization and remediation, and regulatory closure.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With over 10 years of experience in the environmental field, Ms. King has served as a senior technical expert who has completed numerous senior technical evaluations relating to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, groundwater monitor well installation, report preparation, geographic information system (GIS) mapping/database, sampling and monitoring groundwater, remedial design and installation, groundwater modeling, air permitting; and, served as a responsible project manager overseeing all aspects of underground storage tank (UST) closures, free product removal, pilot testing/studies, contaminant fate and transport modeling, multi phase extraction, vapor extraction, air sparging, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Associate/Environmental Services Manager (2003-Current)

Ms. King currently serves as the Phoenix Office Environmental Services Manager, overseeing an environmental staff of 30 environmental professionals and 7 support staff. Ms. King is responsible for quality assurance management for the Phoenix Environmental Services Group, and is the lead technical advisor on groundwater and surface water compliance and permitting, Phase I and Phase II ESAs, Groundwater Resource Evaluations, Strategic Environmental Management and Mine Site investigations and closures. Ms. King also serves as technical advisor and senior oversight on projects related to site characterization and remediation, remedial option feasibility studies, and remedial system design and installations.

Brown and Caldwell, Phoenix, Arizona - Senior Project Manager (2001-2003)

Ms. King served as the senior project manager for a national client engaged in property transactions involving Phase I and Phase II ESAs and site remediation. Ms. King provided senior technical oversight on projects involving remedial investigations and design and installation of remedial systems, and prepared work plans and closure reports for the sites. Ms. King was responsible for developing the client's environmental program and for obtaining regulatory closure for over 30 sites across the United States. Ms. King also oversaw the development of a web-based Environmental Management Information System that was designed to maintain environmental data for over 500 facilities. Ms. King worked with the client and their contractors to develop a pollution prevention plan, and to establish procedures for disposal of hazardous and investigative derived wastes. Within two years, Ms. King was able to reduce the client's environmental liability by over \$1M and bring them into substantial compliance with federal and state regulations. During this time, Ms. King was also involved with several groundwater permitting projects, hydrogeologic investigations and groundwater modeling projects.

Brown and Caldwell, Phoenix, Arizona - Project Manager (1999-2001)

Ms. King was responsible for conducting a regional water resource evaluation of the West Texas aquifers. The study was commissioned by the El Paso Water Utilities and a private client and included the evaluation of water resources, water quality, aquifer boundaries, water rights and land ownership and uses. The study involved workplan preparation well installation, groundwater testing, and groundwater modeling. A regional GIS database was also established to evaluate the water resource and water quality data and to assist the client in evaluating potential water resources for the City of El Paso. During this time, Ms. King was also involved with various surface water and groundwater permitting activities and associated hydrogeologic investigations.

Brown and Caldwell, Phoenix, Arizona - Project Manager (1997-1999)

Ms. King was responsible for conducting extensive soil and groundwater investigations at mine sites in support of APP and remedial activities. Ms. King's responsibilities included preparation of workplans, installation of monitor wells, collection of soil samples, inventory of hazardous materials, hazardous materials removal, and landfill permitting.

Brown and Caldwell, Phoenix, Arizona - Staff Geologist (1995-1997)

Ms. King was engaged in various field activities including soil and groundwater sampling, monitor well installation and testing, public supply well installation and testing, groundwater modeling, remedial well installation, database development, remedial investigation and feasibility studies, closure plan preparation, impacted soil delineation, excavation, and removal, and Phase I and Phase II ESAs. Ms. King was also responsible for preparing and editing various technical reports.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Philip J. Lagas, R.G.		Title Vice President	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional Level VI		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Principal-in-Charge		Education M.S., Geological Sciences, Lehigh University, 1984 B.S., Environmental Sciences and Resource Management, Lehigh University, 1981	
Years of Experience 21	Years of Related Experience 21	Registrations and Certifications Held and Year Received Registered Geologist, # 33750, Arizona, 1999 40-Hour OSHA HAZWOPER, 1986 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour OSHA HAZWOPER, Supervisor, 1986	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1998	Current
2.	Basin and Range Hydrogeologists, Inc.	1991	1998
3.	Earth Tech, Inc.	1984	1991
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<p>Executive Summary of Career Highlights</p> <p>Philip J. Lagas, R.G. has 21 years of experience managing multidisciplinary waste management and environmental projects, including geologic and hydrogeologic characterization studies, environmental permitting and compliance assessments, and remedial response studies. As Environmental Services Practice Leader, Mr. Lagas provides oversight on environmental projects throughout the southwestern United States. For commercial and industrial clients, he has conducted remedial response investigations, developed and implemented contingency, pollution prevention, and closure/post closure plans, prepared applications for hazardous waste, wastewater discharge, and air quality permits, and conducted audits to evaluate compliance with environmental regulations.</p> <p>An active participant in several professional organizations, Mr. Lagas serves on the Board of Directors of the Arizona Association of Industries and is Co-Chair of the Environmental, Health and Safety Committee. For the Arizona Department of Environmental Quality (ADEQ), he is an active member of several stakeholder committees to provide ADEQ with recommendations for improving its environmental regulatory programs. Two of those committees, the Groundwater Cleanup Task Force and the Soil Remediation Standards Task Force, resulted in legislation and rules that significantly changed the way remedial response projects are conducted in Arizona.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 21 years of experience managing multidisciplinary remedial response projects, Mr. Lagas serves as a senior technical expert who has completed numerous senior technical evaluations pertaining to underground storage tank (UST) closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installations, report preparation, geographic information system (GIS) mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, air permitting, multi phase extraction, vapor extraction, air sparging, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Vice President and Environmental Services Practice Leader

As Environmental Services Practice Leader, Mr. Lagas provides oversight and senior technical review on environmental projects in the Southwestern United States. For Brown and Caldwell's clients in Arizona, Mr. Lagas functions as a Project Director for large Federal and State Superfund projects and complex Brownfield remediation projects; provides senior technical review and strategy development for site characterization and remediation projects; acts as the regulatory liaison for environmental projects; and assists with environmental permitting and regulatory compliance assessments. In addition, Mr. Lagas has overseen the design and installation of soil and groundwater remediation systems, conducted Phase I and II Environmental Site Assessments, prepared workplans and reports for investigation, remediation, and site closure projects, and represented clients during negotiations with regulatory agencies. Mr. Lagas has provided permitting and regulatory compliance assistance to industrial facilities including pollution prevention and waste minimization planning, Arizona Aquifer Protection Permit (APP), Resource Conservation and Recovery Act (RCRA), National Pollutant Discharge Elimination System (NPDES), and Clean Air Act permitting, compliance auditing, and litigation support. As a Vice President, Mr. Lagas is an officer of Brown and Caldwell with the authority to sign contracts, assign resources to meet the needs of specific projects, negotiate with clients and subcontractors to resolve disputes, and manage Brown and Caldwell's professional staff. Mr. Lagas is registered with the Arizona State Board of Technical Registration as Brown and Caldwell's Geologist of Record.

Basin and Range Hydrogeologists, Inc., Phoenix, Arizona - Vice President and Principal

As a Vice President and Principal at Basin & Range Hydrogeologists, Inc., Mr. Lagas was responsible for managing complex remedial response projects, environmental permitting and compliance projects, and Phase I and II Environmental Site Assessments. In this role, Mr. Lagas conducted and managed preliminary assessments, soil and groundwater characterization investigations, feasibility studies, design and installation of remediation systems, RCRA closure projects and corrective action investigations, facility decommissioning and demolition projects, facility permitting under various regulatory programs, and regulatory compliance audits. Mr. Lagas supervised technical professionals at Basin & Range, managed project budgets and schedules, prepared and negotiated contracts, and was an officer of the company with the authority to sign contracts and assign resources to projects.

Earth Tech, Inc. - Staff Geologist through Associate Principal

Mr. Lagas was hired by Earth Tech in 1984 as a Staff Geologist and was progressively promoted to Associate Principal in 1990. As a Staff and Project Geologist, Mr. Lagas performed literature studies to characterize geologic and hydrogeologic conditions at waste management facilities; prepared workplans for field and laboratory investigations, conducted soil vapor, soil, and groundwater sampling, installed monitor wells, analyzed field and laboratory data, and prepared reports for submittal to clients and regulatory agencies. After being transferred to Arizona in 1988, Mr. Lagas was the Program Manager for Earth Tech's Water Quality Assurance Revolving Fund (WQARF) contract with the State of Arizona. As the Program Manager for the WQARF contract, Mr. Lagas worked with ADEQ project managers and Earth Tech's professional staff to develop scopes of work and investigation strategies for WQARF sites assigned to Earth Tech, prepare and implement workplans for remedial investigations and potentially responsible party searches; prepare presentation materials and provide support during public meetings and informational work shops; and prepare project reports and technical memorandum. Mr. Lagas also functioned as Earth Tech's Project Manager for the West Central Phoenix WQARF Registry site's Remedial Investigation and managed numerous other environmental projects for commercial and industrial clients in Arizona.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Jeff Littell		Title Principal Scientist	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Professional Level IV		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization, and Remediation	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Quality Assurance Program Manager and Senior Technical Reviewer		Education B.S., Geology, Kansas State University, 1994	
Years of Experience 13	Years of Related Experience 13	Registrations and Certifications Held and Year Received 40-Hour OSHA HAZWOPER, 1994 8-Hour OSHA HAZWOPER Refresher, 2005 8- Hour MSHA, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2005	Current
2.	Arizona Department of Environmental Quality	1998	2005
3.	Mira Vista Environmental, Inc.	1996	1998
4.	Knightly Environmental, Inc.	1994	1996
5.	Grant Environmental Consultants	1992	1994
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<p>Executive Summary of Career Highlights</p> <p>Mr. Jeff Littell has 13 years of experience and in-depth knowledge in environmental regulatory compliance, strategic environmental management and hydrogeology pertaining to underground storage tanks (USTs). Mr. Littell has personally conducted, overseen and evaluated numerous environmental investigative and remedial activities for technically and legally complex leaking UST (LUST) contaminated sites. Further, Mr. Littell has conducted and overseen numerous risk assessment and UST removal activities. Mr. Littell has performed regulatory program development for the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (EPA), Region IX, including preparing, overseeing and training staff in federal and State of Arizona environmental regulations, policies and guidance. He has served as a hydrologist III and case manager for ADEQ's LUST Enforcement Unit, at which time he oversaw numerous LUST corrective action activities throughout the State of Arizona. Further, Mr. Littell served as ADEQ's Site Assessment Unit Manager, at which time he oversaw the development of the Technical Support Section's quality assurance program plan and the drafting of the revised WQARF Eligibility and Evaluation Site Scoring Model (similar to the federal Superfund Hazardous Ranking System). Mr. Littell is an expert in determining responsible party compliance with federal and state environmental rules and regulations; overall project and case management of regulatory agency voluntary and enforcement cases relating to the characterization and remediation of contaminated sites; and, management of regulatory agency and consultant programs and personnel.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With over 13 years of experience and in-depth knowledge in environmental regulatory compliance, strategic environmental management and hydrology, Mr. Littell serves as a senior technical expert who has completed numerous senior technical evaluations pertaining to UST closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installations, report preparation, geographic information system (GIS) mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, air permitting, multi phase extraction, vapor extraction, air sparging, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Principal Scientist

Mr. Littell is a principal scientist who has served as a senior project manager for numerous technically and legally complex contaminated sites, including UST closures, LUST investigative activities, risk assessments, large scale Phase I and II Environmental Site Assessments (ESAs), ADEQ Voluntary Remediation Program (VRP) characterization and remediation activities, and APP and NPDES/AZPDES permitting activities. In addition, Mr. Littell serves as the Phoenix Environmental Services Group's senior technical reviewer and quality assurance program manager for multiple programmatic due diligence, regulatory compliance, risk assessment, investigation and remediation sites. Mr. Littell is responsible for the supervision of geologists, engineers, environmental scientists and field staff that conduct investigative, remedial, due diligence, regulatory compliance, risk assessment, and permitting activities; budgeting; marketing; senior technical reviews and quality assurance program management of proposals, workplans and reports for due diligence, regulatory compliance, investigation, remediation and closure activities; and, interacting with federal, state, and municipal environmental programs.

Arizona Department of Environmental Quality, Phoenix, Arizona - Site Assessment Unit, Manager

Mr. Littell managed ADEQ's Water Quality Assurance Revolving Fund (WQARF) Preliminary Investigation (PI) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Preliminary Assessment/Site Inspection (PA/SI) programs. Mr. Littell was responsible for the supervision of project managers, hydrologists and environmental protection specialists that conduct environmental investigations under WQARF, CERCLA, Resource Conservation and Recovery Act (RCRA) and Brownfields. Under the WQARF PI program, Mr. Littell worked closely with the ADEQ Tanks Program Division regarding referrals of LUST sites not within the program's jurisdiction. He was the senior technical reviewer of all documents produced by the programs, including workplans and technically and legally complex investigation and closure reports. Mr. Littell developed WQARF PI, PA/SI, Brownfields, RCRA Facility Assessment and Declaration of Environmental Use Restriction fiscal year workplans for project managers, hydrologists, environmental protection specialists and staff. He was responsible for the program's annual budget, including negotiating fiscal year grant funds with the U.S. EPA, Region IX, and regulatory program development including the preparation of, and training staff in federal and state environmental rules and regulations, policies, and guidance. Mr. Littell served as the Waste Programs Division's public information request contact, and the Technical Support Section's quality assurance program contact, chief hydrologist and senior technical advisor.

Arizona Department of Environmental Quality, Phoenix, Arizona - LUST Enforcement Unit, Hydrologist III

Mr. Littell was a case manager for ADEQ's LUST enforcement program. His responsibilities included evaluating the adequacy of investigative and remedial activities conducted for technically and legally complex contaminated sites; regulatory program development including the preparation of, and training staff in LUST voluntary and enforcement boilerplate documents; determining responsible party compliance with federal and state environmental rules and regulations, policies and guidance; issuing notice of violations and administrative orders; supervising environmental field activities and conducting regulatory inspections; senior technical review of environmental investigation, remediation and closure workplans, reports and associated activities; collecting soil, soil vapor, surface water, groundwater and air samples; and, overall management of enforcement sites relating to the characterization and remediation of contaminated sites.

Mira Vista Environmental, Inc., Gilbert, Arizona - President/Senior Environmental Hydrologist

Mr. Littell was the president and senior environmental hydrologist of an environmental firm that conducted turnkey consulting services for suspected and confirmed contaminated sites. Responsibilities included: conducting all aspects of Phase I and II ESAs; senior technical reviews of environmental investigation project plans, reports and associated activities, including Phase I and II ESAs, groundwater modeling, land and water use, and data management; collecting soil, soil vapor, surface water, groundwater and air samples; budgeting; marketing; and, interacting with federal, state and municipal environmental programs.

Knightly Environmental, Inc., Lenexa, Kansas - Project Manager/Environmental Geologist

Mr. Littell was a project manager for an environmental firm that conducted consulting services for suspected and confirmed contaminated sites. Responsibilities included: conducting all aspects of site investigations and remedial actions for LUST, RCRA, solid waste and CERCLA sites; UST removals; scheduling and supervising environmental field activities; collecting soil, soil vapor, surface water, groundwater and air samples; supervising geologists, engineers and technical staff responsible for conducting field activities and environmental report preparation; preparing and conducting senior technical reviews of geotechnical and environmental investigation, remediation and closure workplans, reports and associated activities; budgeting; marketing; and, interacting with federal, state and municipal environmental programs.

Grant Environmental Consultants, Inc., Topeka, Kansas - Environmental Geologist

Mr. Littell was an environmental geologist for environmental firm that conducted consulting services for suspected and confirmed contaminated sites. Responsibilities included: completing all aspects of Phase I and II ESAs; collecting soil, soil vapor, surface water, groundwater and air samples; preparation of environmental investigation project plans and report; and, interacting with federal, state and municipal environmental programs.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Matt Nation		Title Senior Geologist	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Professional IV		Area of Expertise UST Closure, Site Investigation/Characterization and Remediation	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Project Geologist – UST Closure, Site Investigation/Characterization and Remediation		Education B.S., Geology, University of Wyoming, 1985 M.S., Geology, Northern Arizona University, 1990	
Years of Experience 15	Years of Related Experience 15	Registrations and Certifications Held and Year Received Registered Geologist, #37117, Arizona, 2001 40-Hour OSHA HAZWOPER, 1991 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour OSHA Management/Supervisory Training, 1994 4-Hour OSHA Excavation/Trenching Competent Person Training, 1994 DOT/HM 126F HAZMAT Transportation Training, 2002	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2001	Current
2.	IT Corporation	1998	2001
3.	Fluor Daniel GTI	1996	1998
4.	Groundwater Technology, Inc.	1991	1996
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<p>Executive Summary of Career Highlights</p> <p>Matthew Nation has 15 years of experience in environmental characterization and remediation projects in Arizona. He has also performed underground storage tank (UST) closure activities and environmental characterization/remedial design, and geologic resource investigations throughout the southwestern United States, California and Mexico. He has participated in numerous projects under multiple regulatory programs, including the Arizona Department of Environmental Quality (ADEQ)-State Lead leaking UST (LUST) program, Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), State of Arizona Water Quality Assurance Revolving Fund (WQARF or state Superfund), Resource Conservation and Recovery Act (RCRA), Aquifer Protection Permit (APP) and National/Arizona Pollution Discharge Elimination System (NPDES/AZPDES). Mr. Nation has also performed environmental services for multiple sites under Arizona-municipal/county, and Federal guidelines for characterization, demolition/restoration, and waste management. He has been a project manager involved with the characterization and remediation of a wide range of organic and inorganic compounds in soil, water, and solid waste. He has 15 years of involvement and supervision and coordination of monitoring programs for compliance and remedial purposes under Arizona and Federal guidelines. His field experience includes supervision of UST closures, drilling, monitor and remedial well installation, excavation, construction, and other types of sampling tasks in soil, groundwater, bedrock, and solid waste. He has extensive experience in the preparation of written documents for monitoring, planning, and compliance purposes, including all aspects of data generation, review, and management. His experience also includes knowledge of geotechnical testing of soil and construction materials, and supervision of soil and foundation preparation for construction purposes.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 15 years of experience, Mr. Nation has served as a senior technical expert who has completed numerous senior technical evaluations relating to UST closures, environmental activities relating to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installation, sampling and monitoring groundwater, pilot testing/studies, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; served as a project manager who has completed remedial design and installation, contaminant fate and transport modeling report preparation, multi phase extraction, vapor extraction, air sparge and risk assessment, geographic information system (GIS) mapping/database, air permitting; and, assisted on groundwater modeling.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Senior Geologist.

Mr. Nation serves as a project manager and senior geologist for environmental characterization, remediation, and compliance monitoring of sites in Arizona, California, and Texas. His responsibilities include: Project management of UST/LUST closure projects with subsequent characterization, remediation, and compliance monitoring, CERCLA, municipal/county, fuel recycling, AZPDES/NPDES permitting, and solid waste sites; Scheduling and supervision of UST closures, Phase II Environmental Site Assessments (ESAs), characterization, remediation, and compliance monitoring project tasks and technical staff, including training; Monitor well installation in single and multiple aquifers; Remedial system design, installation, and monitoring of soil vapor and groundwater remediation systems; Geologic/geophysical investigations; Geologic resource evaluations; Soil, soil vapor, solid waste, surface and groundwater sampling; Preparation and review of UST/LUST closure, characterization, and monitoring reports, workplans, sample plans, quality assurance project plans, remedial action plans, Aquifer Protection Permits, and proposals; Management of landfill monitoring and compliance reporting; Supervision of data management and modeling staff; and, Client and Arizona/Federal regulatory agency interaction and strategic closure planning for UST, LUST and CERCLA sites.

IT Corporation, Phoenix, Arizona - Senior Geologist.

Project Manager and Geologist for environmental characterization, remediation, and compliance monitoring of sites in Arizona. Project responsibilities included: Project management and performance of characterization, remediation, and compliance monitoring tasks for LUST, WQARF, CERCLA, Municipal, and solid waste sites; Scheduling and supervision of UST closures, Phase II ESAs, characterization, remediation, and compliance monitoring project tasks and technical staff, including training; Monitor well installation in single and multiple aquifers and bedrock; Remedial system design, installation, and monitoring of soil vapor and groundwater remediation systems; Geologic/geophysical investigations and modeling; Geologic resource evaluations; Soil, soil vapor, solid waste, surface and groundwater sampling; Supervision of demolition/restoration of structures at Federal facilities; Preparation of UST closure, characterization, and monitoring reports, preliminary assessment reports, workplans, sample plans, quality assurance project plans, remedial action plans, feasibility studies, engineering evaluations and cost estimates, Aquifer Protection Permits, and proposals; Supervision of data management and modeling staff; and, Client and Arizona/Federal regulatory agency interaction and strategic closure planning for LUST, WQARF, and CERCLA sites.

Flour Daniel GTI, Tempe, Arizona - Project Geologist.

Project Geologist for environmental characterization and remediation of sites for soil and groundwater contamination. Responsibilities included: Performance of field tasks associated with UST closures, Phase II ESAs, characterization of LUST, WQARF, CERCLA, municipal, ADOT, bulk fuel terminals, power generating stations, and solid waste sites; Monitor well installation in single and multiple aquifers and bedrock; Remedial system design, installation, and monitoring of soil vapor and groundwater remediation systems; Scheduling and supervision of project tasks and technical staff; Soil, soil vapor, air, solid waste, surface and groundwater sampling; Geologic/geophysical investigations; Preparation of characterization and monitoring reports, Preparation of workplans, sample plans, corrective action plans, Aquifer Protection Permits, and proposals; Assistance with research for Phase I ESA reports; Supervision of data management and modeling staff; and, Client and Arizona regulatory agency interaction and strategic closure planning for CERCLA and WQARF sites.

Groundwater Technology, Inc., Tempe, Arizona - Project Geologist.

Project Geologist for environmental characterization and remediation of sites for soil and groundwater contamination. Responsibilities included: Performance of field tasks associated with Phase II ESAs, supervision of UST closures, characterization of LUST, WQARF, EPA Superfund, City of Phoenix, bulk fuel terminals, and solid waste sites; Monitor well installation in single and multiple aquifers and bedrock; Remedial system installation and monitoring of soil vapor and groundwater remediation systems, including excavation and incineration of soil; Scheduling and supervision of project tasks and technical staff; Soil, soil vapor, air, surface and groundwater sampling; Preparation of UST closure and characterization reports, monitoring reports, workplans, sample plans, corrective action plans, and proposals; and, Client and Arizona regulatory agency interaction; Assistance with research for Phase I ESA reports.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Steve Rakowski		Title Supervising Engineer	
Personnel Classification/Level (Reference Attachment IV item 16) Professional IV		Area of Expertise Risk Assessment and Site Investigation/Characterization	
Proposed Project Role (e.g. Project Manager, Project Engineer, Project Hydrologist, ect.) Project Manager – Risk Assessment and Site Investigation/Characterization		Education B.S., Chemical Engineering, University of Wisconsin, 1982 M.S., Environmental Engineering, University of Wisconsin, 1991	
Years of Experience 21	Years of Related Experience 14	Registrations and Certifications Held and Year Received Environmental Engineer, #26196, Arizona, 1992 Environmental Engineer, Wisconsin, #28076, 1991 40-Hour OSHA HAZWOPER, 1991 8-Hour OSHA HAZWOPER Refresher, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1998	Current
2.	Basin & Range Hydrogeologists, Inc.	1994	1998
3.	Arizona Department of Environmental Quality	1991	1994
4.	Aura II, Inc.	1983	1991
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<p>Executive Summary of Career Highlights</p> <p>Stephen Rakowski has been responsible for various environmental engineering projects throughout his career. His experience and expertise includes management of complex due diligence, site investigation and remediation projects for industrial clients that are subject to a high degree of scrutiny from the Arizona Department of Environmental Quality (ADEQ) and the public. In connection with those projects, Mr. Rakowski has played a key role in drafting and negotiating the provisions of the associated administrative orders, thereby maintaining the interests of both the client and ADEQ. He has extensive Resource Conservation and Recovery Act (RCRA) experience, both in terms of developing Part B permit applications for new, existing, and modified facilities, and in assisting clients with evaluation and implementation of compliance procedures. He has prepared RCRA closure, training, and contingency plans, and has designed and implemented waste minimization and pollution prevention techniques. Mr. Rakowski has managed ongoing remediation systems for releases from former USTs, including soil vapor extraction and free product recovery. As a former ADEQ employee, Mr. Rakowski also has a unique perspective on the roles of the regulator and regulated entity under a variety of situations, as well as the interactions that can occur between the two parties. He has prepared Title V and non-Title V air permit applications for various industrial facilities and conducted process reviews and inventories of air pollutant emissions to evaluate Title V applicability. Mr. Rakowski has assisted clients with strategic planning of possible facility changes to identify options that would minimize the regulatory impact of air permitting requirements. He has assisted clients with performance of air dispersion modeling and has prepared reports to ADEQ and various local jurisdictions detailing annual emissions and requesting approval of source changes.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With over 21 years of environmental experience, Mr. Rakowski has served as a senior technical expert who has completed numerous senior technical evaluations relating to soil and groundwater site investigations, bore hole sampling and logging, groundwater monitor well installation, report preparation, sampling and monitoring groundwater; served as project manager who has completed pilot testing/studies, remedial design and installation, contaminant fate and transport modeling, air permitting, risk assessments and in-situ soil treatment; served as responsible project manager overseeing all aspects of free product removal, GIS mapping/database, groundwater modeling, system operation and maintenance and in-situ groundwater treatment; and, completed integral parts of multi phase extraction, vapor extraction and air sparging.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Supervising Engineer

Project manager and senior technical reviewer for numerous Phase I and Phase II Environmental Site Assessments (ESAs), soil, soil vapor, and groundwater investigation projects. Responsible for direct administrative and technical oversight of entry to senior level technicians, scientists, geologists, and engineers. Responsible for the performance of mid- to senior-level task managers who are in turn responsible for overseeing field staff and implementing the details of various tasks on more complex projects. Conducts technical reviews of all environmental reports, workplans, data, contracts, task orders, and proposals before they can be submitted to clients and/or subcontractors. Prepares and reviews workplans for soil and groundwater investigations, remedial investigation reports, and risk assessment evaluations. Performs senior technical reviews of such documents under projects managed by other staff. Conducts technical reviews for soil vapor extraction and air sparge (SVE/AS) progress reports and SVE decommissioning plans and reports. Designed and implemented contaminated soil removal projects. Developed large portions of consent order language pertaining to investigation and remediation of soil and groundwater, which was subsequently agreed to by U.S. Environmental Protection Agency and ADEQ and implemented on projects with high degrees of public visibility. Managed projects having vadose zone and groundwater modeling components and significant database and Geographical Information System requirements.

Basin and Range Hydrogeologists, Inc., Phoenix, Arizona - Project Engineer

Project manager and project engineer for soil investigation, groundwater investigation, and soil remediation projects. Responsibilities included development of soil investigation workplans and reports, RCRA closure plans, and RCRA closure reports. Assisted with field implementation of soil and groundwater sampling investigations and supervision of technicians and geologists conducting such activities. Designed and oversaw installation of multi-well, multi-zone SVE/AS remediation systems. Prepared design and progress reports related to SVE/AS design and operation. Provided direct communication to client and agency contacts. Prepared Phase I and Phase II ESAs. Reviewed groundwater monitoring reports. Planned and conducted waste materials classification activities and prepared demolition specifications for abandoned industrial facilities.

Arizona Department of Environmental Quality, Phoenix, Arizona - Environmental Engineer

Managed various RCRA permit issues for several hazardous waste treatment, storage, and disposal (TSD) facilities, including permit issuance, permit modification, regulated unit closure, and RCRA corrective action. Performed technical review of permit applications, RCRA facility assessment reports, RCRA facility investigation reports, remedial investigation reports, risk assessment reports, feasibility studies, and groundwater remediation progress reports. Responsible for communicating with regulated entities to resolve technical deficiencies. Actively involved in development of guidance and policies used by Hazardous Waste Section personnel.

AURA II, Inc., Milwaukee, Wisconsin - Environmental & Safety Engineer

Responsible for implementation of compliance strategies regarding environmental and safety regulations for a small industrial firm involved with reclaiming gold and other precious metals from electronic industry scrap (e.g., printed circuit boards, plating solutions, etc.). Prepared routine reports to various agencies and responsible for related recordkeeping.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Megan Sheldon		Title Scientist I	
Personnel Classification/Level (Reference Attachment IV item 16) Professional Level III		Area of Expertise UST Closure and Site Investigation/Characterization	
Proposed Project Role (e.g. Project Manager, Project Engineer, Project Hydrologist, ect.) Project Scientist – UST Closure and Site Investigation/Characterization		Education B.S., Geography and Environmental Studies, Western Michigan University, 2001 M.S., Environmental Science, Washington State University, 2003	
Years of Experience 2	Years of Related Experience 2	Registrations and Certifications Held and Year Received 40-Hour OSHA HAZWOPER, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell, Phoenix, Arizona	May 2005	Current
2.	Innovative Environmental Solutions, Brighton, Michigan	January 2004	May 2005
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<p>Executive Summary of Career Highlights</p> <p>Megan Sheldon has 2 years of experience in the environmental consulting industry. Her experience includes project management and oversight for a variety of environmental investigations. Ms. Sheldon is skilled in sampling soil, mine materials, groundwater and surface water; management and analysis of environmental data; review and analysis of state and federal regulations; writing technical reports such as Phase I and II environmental site assessments, underground storage tank (UST) closures, site characterization, free product recovery, groundwater monitoring and sampling, baseline environmental assessments, quality assurance project plans, and sampling and analysis plans.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 2 years experience in the environmental science field, Ms. Sheldon has assisted the project manager in supervising key personnel to complete integral parts of UST closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, free product removal, report preparation, sampling and monitoring groundwater, multi phase extraction, vapor extraction, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and, completed integral parts of bore hole sampling and logging, geographic information system (GIS) mapping/database, air permitting and risk assessment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona – Scientist I

Ms. Sheldon has collected soil, mine material, and groundwater samples. She is experienced in performing routine operation and maintenance of soil vapor extraction systems and free product removal using a vacuum truck. Her experience also includes managing and analyzing soil and groundwater data to determine compliance with applicable regulatory standards. Ms. Sheldon has written technical reports, including UST closures and leaking UST (LUST) site characterizations, quality assurance project plans, sampling plans, and assisted with air and water quality permitting and regulatory compliance.

Innovative Environmental Solutions, Inc., Brighton, Michigan – Site Assessment Project Manager

Ms. Sheldon managed and analyzed soil and groundwater data for UST clean closures and LUST sites and provided project oversight during UST removals, site characterizations, groundwater monitoring and sampling, free product recovery and remedial excavations. She applied risk-based assessment processes, including the identification of potential receptors and relevant exposure pathways, to LUST sites with varying geologic/hydrogeologic conditions. Ms. Sheldon wrote several technical reports for UST removals, initial and final assessments, LUST closures, free product recovery, and groundwater monitoring and sampling.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Jarrell Southall		Title Supervising Scientist	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional Level VI		Area of Expertise Risk Assessment and Site Investigation/Characterization	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Project Manager – Risk Assessment Project Scientist - Site Investigation/Characterization		Education B.S., Mathematics/Chemistry, Henderson State University, 1963	
Years of Experience 40	Years of Related Experience 40	Registrations and Certifications Held and Year Received 40-Hour OSHA HAZWOPER, 1995 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour MSHA, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1995	Current
2.	Self-Employed	1993	1995
3.	Ensco, Inc.	1986	1993
4.	Self-Employed	1983	1986
5.	Arkansas Department of Environmental Quality	1965	1983
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<p>Executive Summary of Career Highlights</p> <p>Jarrell Southall has 40 years experience in environmental management, including 18 years with the Arkansas Department of Pollution Control and Ecology (now the Arkansas Department of Environmental Quality); 7 years in leadership positions with ENSCO, a company involved in the development and operation of hazardous waste management facilities; and 13 years as a consultant to industry. During his career with the Arkansas Department of Environmental Quality, including five years as the agency's executive director, Mr. Southall directed a wide range of environmental programs and led the development of the resources required for the it to receive delegation of authority to administer the PSD, NESHAPS, NSPS, NPDES, UIC, and RCRA programs of the U.S. Environmental Protection Agency and the strip mining control and land reclamation program of the U.S. Department of Interior. Mr. Southall served as ENSCO's contract administrator for the State of Arizona's proposed Hazardous Waste Management Facility and later as ENSCO's Procedures Administrator where he developed operating nationwide procedures for all of ENSCO's operations. During his career as a consultant, including 10 years with Brown and Caldwell, Mr. Southall served as project manager on projects to obtain APPs for industrial facilities, a large gas-fired power plant and a in-situ copper mine; and as a project manager or technical consultant for a variety of projects involving soil surveys, the development of mine closure plans and the remediation of mine and industrial facilities.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 40 years experience in solving a wide range of environmental management problems, Mr. Southall serves as a senior technical expert who has completed numerous senior technical evaluations relating to underground storage tank (UST) closures, environmental activities pertaining to surface water quality standards, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installation, report preparation, geographic information system (GIS) mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, air permitting, multi phase extraction, vapor extraction, air sparging, risk assessments, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Supervising Scientist

Serves as project manager for the acquisition of APP permits for new and existing facilities; as project manager or as senior technical adviser for the preparation for APP-related closure plans for mines and industrial facilities that had closed or were in the process of closing; and, as project manager or as a senior technical advisor for six Arizona Department of Environmental Quality (ADEQ) Voluntary Remediation Program investigation/characterization and remediation projects.

Self Employed

Work was not related to environmental management.

ENSCO, Inc. – Procedures Administrator

As procedures administrator, Mr. Southall used nation-wide quality management teams to develop operating procedures for ENSCO's hazardous waste management facilities in Arkansas, California and Georgia; for hazardous waste transportation in all 47 states in which ENSCO was licensed to operate; and, for hazardous waste removal operations in all 47 states in which ENSCO was licensed to operate. The procedures were fundamental to ENSCO being the first hazardous waste management company in the United States to receive ISO 9000 certification.

ENSCO, Inc. – Contract Administrator

As contract administrator for the proposed State of Arizona Hazardous Waste Management Facility, selected and managed contractors who performed archeological and endangered species studies, a hydrogeologic investigation, baseline groundwater monitoring, groundwater resource investigations, and an assured water supply study; coordinated preparation of environmental permits; and, coordinated work contractors, agencies and utilities involved in site preparation, construction of facility components, construction of State Highway 238, and the installation of a 20-mile power and 6-mile gas and water lines.

Self Employed

Advised industrial clients on a wide-range of environmental issues and assisted clients in the development of their response to State of Arizona's request for proposal for a state-owned, contractor-operated hazardous waste management facility.

Arkansas Department of Pollution Control and Ecology - Executive Director

Managed a state regulatory agency having statewide responsibilities in air and water pollution control, construction of wastewater treatment facilities, environmental preservation, emergency response, mining, solid and hazardous waste management, solid and hazardous waste management, UST closure activities, characterization and remediation of soil, surface water and groundwater impacted by improper land disposal and leaking USTs, and underground injection control. Led the development of technical, administrative, and legal resources necessary for the state to receive delegation of permitting and enforcement authorities of the U.S. Environmental Protection Agency (PSD, NESHAPS, NSPS, NPDES, UIC, and RCRA) and the U.S. Department of Interior Office of Surface Mining's strip mining control and land reclamation program (Arkansas was one of the first states to receive such a wide range of federal authorities and was the first state to be delegated RCRA authority). Soil, surface water and groundwater assessment and remediation activities included leaking USTs at gasoline service stations, abandoned oil refineries, and fuel residues that were forced into the surrounding formation when an armed Titan II exploded in its silo.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual J. Patrick Wiegand		Title Principal Hydrogeologist	
Personnel Classification/Level <i>(Reference Attachment IV item 16)</i> Professional Level V		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation	
Proposed Project Role <i>(e.g. Project Manager, Project Engineer, Project Hydrologist, ect.)</i> Project Hydrogeologist – UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation		Education M.S., Geology, Colorado State University, 1976 B.S., Geology, Washington State University, 1974	
Years of Experience 29	Years of Related Experience 29	Registrations and Certifications Held and Year Received Registered Geologist, #5943, California, 1994 Certified Hydrogeologist, #495, California, 1996 40-Hour OSHA HAZWOPER Certification, 1988 8-Hour OSHA HAZWOPER Refresher, 2005 OSHA Site Supervisor Certification, 1995 DOT Hazardous Materials Certification, 1998	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	1986	Current
2.	Morrison-Maierle, Inc.	1976	1986
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<p>Executive Summary of Career Highlights</p> <p>Pat Wiegand has 29 years of experience in the environmental field including hazardous waste management, soil and groundwater remediation, environmental regulatory compliance, groundwater resource management and development, and engineering geologic investigations. He has served as project manager or principal hydrogeologist for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial investigations (RI) and feasibility studies (FS), Resource Conservation and Recovery Act (RCRA) investigations and corrective actions, underground storage tank (UST) closure activities, leaking UST (LUST) investigations and remedial actions, and industrial waste projects for private and public clients including the Department of Energy and U.S. Navy. During his 10-year tenure on the Navy CLEAN Program, Mr. Wiegand managed and/or provided technical oversight on CERCLA, RCRA, and petroleum corrective action projects at active and closing Navy and Marine Corps facilities including aircraft fueling and maintenance facilities, aboveground storage tank and conveyance facilities, crash-crew training areas, landfills, wastewater treatment plants, transformer storage and maintenance facilities, and munitions storage areas. Earlier in his career, Mr. Wiegand also managed environmental projects involving UST closure activities, soil remediation, and regulatory compliance for petroleum company service stations, refineries, and pipelines. Mr. Wiegand's project experience includes preparation of plans and reports; soil and groundwater sampling; development of monitoring programs; design, implementation, and evaluation of aquifer testing programs including installation of wells; remediation pilot testing; regulatory agency negotiations; hazardous waste management; permitting; and facility closure and decommissioning including implementation of compliance monitoring programs. Mr. Wiegand is a registered geologist and certified hydrogeologist in California and is currently seeking registration as a geologist in Arizona through reciprocity.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 29 years of experience in the environmental field, Mr. Wiegand has served as a senior technical expert who has completed numerous senior technical evaluations relating to soil and groundwater site investigations, bore hole sampling and logging, report preparation, and groundwater sampling and monitoring; served as project manager who has completed UST closures, free product removal and pilot testing/studies; served as responsible project manager overseeing all aspects of environmental activities pertaining to surface water quality standards, remedial design and installation, groundwater modeling, air permitting and risk assessment; assisted the project manager in supervising key personnel to complete integral parts of geographic information system (GIS) mapping/database, contaminant fate and transport modeling, multi phase extraction, vapor extraction, air sparging, system operation and maintenance and in-situ groundwater treatment; and, completed integral parts of in-situ soil treatment.

Work Experience:

Brown and Caldwell, Phoenix, Arizona – Project Manager

Mr. Wiegand is currently managing the RI/FS for a 200-acre former munitions demilitarization area at the Arizona Army National Guard's Camp Navajo located west of Flagstaff. His responsibilities include management of the project schedule and budget, negotiations with regulatory and other governmental agencies on behalf of the National Guard Bureau, preparation of planning documents (work plans, storm water pollution prevention plans, etc.) and reports, supervision of field personnel, oversight of multiple subcontractors, data evaluation, risk assessment, waste management, and development of plans, budgets, and schedules for interim removal action efforts to address soil contamination. Mr. Wiegand was responsible for managing and providing technical oversight for large-scale RI/FS projects at active and closing (under BRAC) US Navy and Marine Corps facilities throughout Southern California. These facilities included aircraft cleaning, fueling, storage, and maintenance facilities, fuel storage and distribution facilities, heavy equipment maintenance facilities, waste oil storage and disposal areas, landfills, wastewater treatment plants, transformer storage and maintenance facilities, and munitions storage and disposal areas. Mr. Wiegand supervised preparation of planning documents, negotiated with federal and California regulatory agencies on behalf of the Navy/Marine Corps, directed multiple teams of field personnel conducting soil and groundwater investigations, documented investigation findings in RI reports and potential remedial alternatives in FS reports, prepared Engineering Evaluation/Cost Analyses in support of interim removal actions, supervised long-term compliance monitoring programs, developed and supervised aquifer testing programs and pilot studies in support of remedial actions, and prepared preliminary designs for soil and groundwater remediation systems. Mr. Wiegand was responsible for managing and implementing soil and groundwater investigations, groundwater compliance monitoring programs, aquifer testing, groundwater modeling, permitting support, UST closure activities, and remediation efforts at DOE/DOD facilities including Lawrence Livermore and Sandia National Laboratories, petroleum company service stations and refineries, chemical manufacturing and packaging facilities, municipal landfills, abandoned mine sites, and wastewater treatment plants in California, Hawaii, Oregon, Texas, and Washington. He also conducted emergency groundwater supply evaluations for municipalities, private water companies, and fish hatcheries in northern California.

Morrison-Maierle, Inc, Helena, Montana – Staff Geologist through Senior Staff Geologist

Mr. Wiegand conducted numerous projects for private and governmental clients in Arizona, Colorado, Iowa, Montana, New Mexico, North Dakota, South Dakota, and Wyoming. Projects included regional groundwater inventories; groundwater supply development for private, municipal, and agriculture uses; groundwater assessments in support of municipal wastewater projects; engineering geologic investigations of canal, dam, and reservoir sites; and streamflow, water quality, and groundwater monitoring. Mr. Wiegand performed literature studies and archival research to support water-rights litigation efforts, geologic mapping for canal alignments and off-stream reservoir sites, developed well designs and prepared detailed well construction specifications, assisted municipalities with bidding and contractor selection processes for well construction projects, supervised well drilling and construction operations, well development and testing, and prepared final reports associated with development of municipal groundwater supplies and agricultural irrigation projects.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Carrolette Winstead		Title Engineer III	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Professional Level III		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Project Scientist – UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation		Education B.S., Chemical Engineering, Purdue, 1995	
Years of Experience 11	Years of Related Experience 11	Registrations and Certifications Held and Year Received Engineer in Training, #N/A, Colorado, 2002 40-Hour OSHA HAZWOPER 1998 8-Hour OSHA HAZWOPER Refresher, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2005	Current
2.	Malcolm Pirnie	2005	2005
3.	URS Corporation (Formerly Dames & Moore)	1997	2005
4.	Optim Environmental Resources, Inc.	1996	1996
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<p>Executive Summary of Career Highlights</p> <p>Carrolette Winstead has over 11 years of experience in the environmental engineering field. Her specialties include underground storage tank (UST) closure activities, investigation and feasibility studies, risk assessments, remediation cost estimating, permitting and compliance, and operation and maintenance of remediation systems. Ms. Winstead has successfully overseen and conducted numerous environmental projects for various private and commercial clients. She has excellent communication and organizational skills that complement her technical skills such as cost control, budgeting, sub management, agency communications and teamwork.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 11 years experience in the environmental engineering field, Ms. Winstead serves as a senior technical expert who has completed numerous senior technical evaluations relating to report preparation; serves as a project manager who has completed UST closures, soil and groundwater site investigations, bore hole sampling and logging, free product removal, groundwater monitor well installations, GIS mapping/database, sampling and monitoring groundwater, pilot testing/studies, remedial design and installation, groundwater modeling, contaminant fate and transport modeling, air permitting, multi phase extraction, vapor extraction, air sparging, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; and has completed integral parts of environmental activities pertaining to surface water quality standards.

Work Experience:

Brown and Caldwell, Phoenix, Arizona – Engineer III

As a new hire at Brown and Caldwell in late 2005, Ms. Winstead has already conducted numerous UST closures and investigative and remedial activities. She has coordinated field activities for various investigation and remediation projects including a large Brownfield project in metropolitan Phoenix.

Malcolm Pirnie – Supervising Project Chemical Engineer

Deputy Project Manager for focused remedial investigation/feasibility study area within the Motorola 52nd Street Superfund National Priorities List site. Responsibilities included acting as the Arizona Department of Environmental Quality (ADEQ) primary contact, prepared work plan and prepared research report. Ms. Winstead provided investigative, remedial and litigation support for various leaking UST (LUST) sites; interpreted state rules/regulations and funding programs; applied rules/regulations during evaluation of existing site documents; and summarized site history and classified site per litigation needs. Prepared technology cost evaluation for contaminated soils site in Washington, including high temperature thermal desorption, excavation and disposal, in-situ high temperature thermal desorption, and in-situ stabilization. Prepared monitoring work plan for bio-venting system site.

URS Corporation. – Project Manager

Managed numerous UST closures and LUST sites including various risk assessment, investigative and remedial activities. LUST site oversight included technically complex impacted groundwater investigation and remediation, operation and maintenance, treatment systems including soil vapor extraction/air sparging and product recovery, conducting pilot tests, managing system design and well installations, preparing for additional system installations, and oversight of drillers and other subcontractors. Prepared sections of various proposals requiring site remediation and/or feasibility. Successfully managed seven UST sites to closure in Colorado and Wyoming, assistant Field Manager for \$4-million-dollar remedial investigation/feasibility study in New Mexico.

Dames & Moore. – Database Programmer

Managed databases and generated outputs for several types of reports with Microsoft Fox Pro and Office for 97 clients such as Motorola, Phelps Dodge, World Resources Company, the City of Payson, and ADEQ. Tested and integrated new field software package for Motorola and performed statistical analysis for several clients with Statistical, SigmaPlot, SigmaStat and Systat.

Optim Environmental Resources, Inc. – Environmental Consultant

Modified several Fee Emission Reports and SARA Emission databases for various clients. Performed emission calculations for the U.S. Environmental Protection Agency (EPA) on behalf of several clients. Determined applicability of state and federal regulations under Title V for various clients. Acquired knowledge of Ohio EPA's STARShip software and submitted several Fee Emission Reports and Title V documentation for various clients.

14. Brief resume of key persons, specialists and individual consultants/associates anticipated for this contract:			
Name of Individual Harrison Whitman		Title Environmental Scientist III	
Personnel Classification/Level (<i>Reference Attachment IV item 16</i>) Professional Level IV		Area of Expertise UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation	
Proposed Project Role (<i>e.g. Project Manager, Project Engineer, Project Hydrologist, ect.</i>) Project Scientist – UST Closure, Risk Assessment, Site Investigation/Characterization and Remediation		Education B.S., Chemistry, Florida State University, 1991	
Years of Experience 13 years	Years of Related Experience 13	Registrations and Certifications Held and Year Received 40-Hour OSHA HAZWOPER, 1995 8-Hour OSHA HAZWOPER Refresher, 2005 8-Hour MSHA, 2005	
Employment History			
	Firms Name	Start Date	End Date
1.	Brown and Caldwell	2005	Current
2.	Shaw Environmental, Inc. (formerly IT Corporation)	1997	2005
3.	Florida Department of Environmental Protection	1995	1997
4.	Shena Inc.	1993	1994
5.	Florida Department of Environmental Protection	1992	1993
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<p>Executive Summary of Career Highlights</p> <p>Mr. Whitman has 13 years of experience in environmental project operations and the supervision of field activities. Mr. Whitman has in-depth experience overseeing and conducting underground storage tank (UST) closure activities and leaking UST (LUST) corrective actions including numerous risk assessments, and investigative and remedial activities. He is experienced in drilling activities associated with the installation of monitor wells and soil borings, soil excavation, soil and groundwater sampling, and aquifer characterization tests. Mr. Whitman is responsible for preparing assessment reports, quarterly monitoring and sampling reports, risk assessments and corrective action plans. Mr. Whitman has had extensive training in OSHA safety standards, is versed in UST and LUST regulatory requirements, and has experience with various remediation technologies.</p>			

Brief Resume Continued

Professional Experience and Qualifications:

With 13 years of experience in the environmental field, Mr. Whitman serves as a senior technical expert who has completed numerous senior technical evaluations pertaining to bore hole sampling and logging, groundwater monitor well installation, report preparation, geographic information system (GIS) mapping/database, sampling and monitoring groundwater; served as project manager who has completed UST closures, soil and groundwater site investigations, system operation and maintenance, in-situ groundwater treatment and in-situ soil treatment; served as a responsible project manager overseeing all aspects of free product removal, remedial design and installation, and risk assessment; assisted the project manager in supervising key personnel to complete integral parts of pilot testing/studies, multi phase extraction, vapor extraction and air sparging; and, completed integral parts of environmental activities pertaining to surface water quality standards, contaminant fate and transport modeling and air permitting.

Work Experience:

Brown and Caldwell, Phoenix, Arizona - Environmental Scientist III

Project manager for a national rental equipment company's environmental program. Responsible for determining the environmental risk associated with lending on commercial properties. Risk is determined by reviewing Phase I ESAs, Phase II ESAs, and other related environmental documentation to determine whether or not the potential existed for significant contamination. Management of employees, report preparation activities, estimating and tracking, client and regulatory agency interactions.

Shaw Environmental Inc., Phoenix, Arizona - Project Manager

Project Manager for a major environmental petroleum retailer's environmental program. Responsible for cradle to grave mitigation of environmental issues at all of the client's Arizona facilities; supervising full range of environmental services such as LUST site characterization, remediation, risk assessments, fuel system decommissioning, UST compliance issues and closures, real estate assessments, reimbursement claims, and rapid response to urgent environmental issues. Prepared reports, coordinated field activities, oversaw projects and budgets, and negotiated scope of work and closure with regulatory agencies. Safety and liability issues were carefully managed to ensure protection of the client's property and customers during all phases of work.

Shaw Environmental Inc., Forest Park, Georgia - Site Supervisor

Site Supervisor for Fort Gillem Army Installation in Georgia. Responsible for overseeing remedial actions at a former 300-acre landfill and LUST site, including the excavation of 26,000 tons of contaminated soils, the injection of chemical oxidation using potassium permanganate, UST removals, and free phase removal of diesel. Directed field investigations that compiled data on the presence, types and concentrations of hazardous and toxic chemicals at 15 sites on base. The sites included several landfill areas, one industrial wastewater treatment plant, three UST sites, one solvent disposal pit, one vehicle wash rack, and two sewage treatment plants. Provided daily technical updates and routinely wrote and reviewed project reports. The work was conducted for the U.S. Army Corps of Engineers under the Total Environmental Restoration Contract.

Shaw Environmental Inc., Tampa, Florida - Project Scientist

Site Manager/Project Scientist for several drycleaner sites impacted by chlorinated solvents under the Florida Department of Environmental Protection's Hazardous Waste Cleanup contract. Additional responsibilities included: providing technical, regulatory (compliance and spill prevention) and quality assurance/quality control support to project managers, including data collection and analysis, work plans and report preparation and/or review; project administration; and regulatory file review.

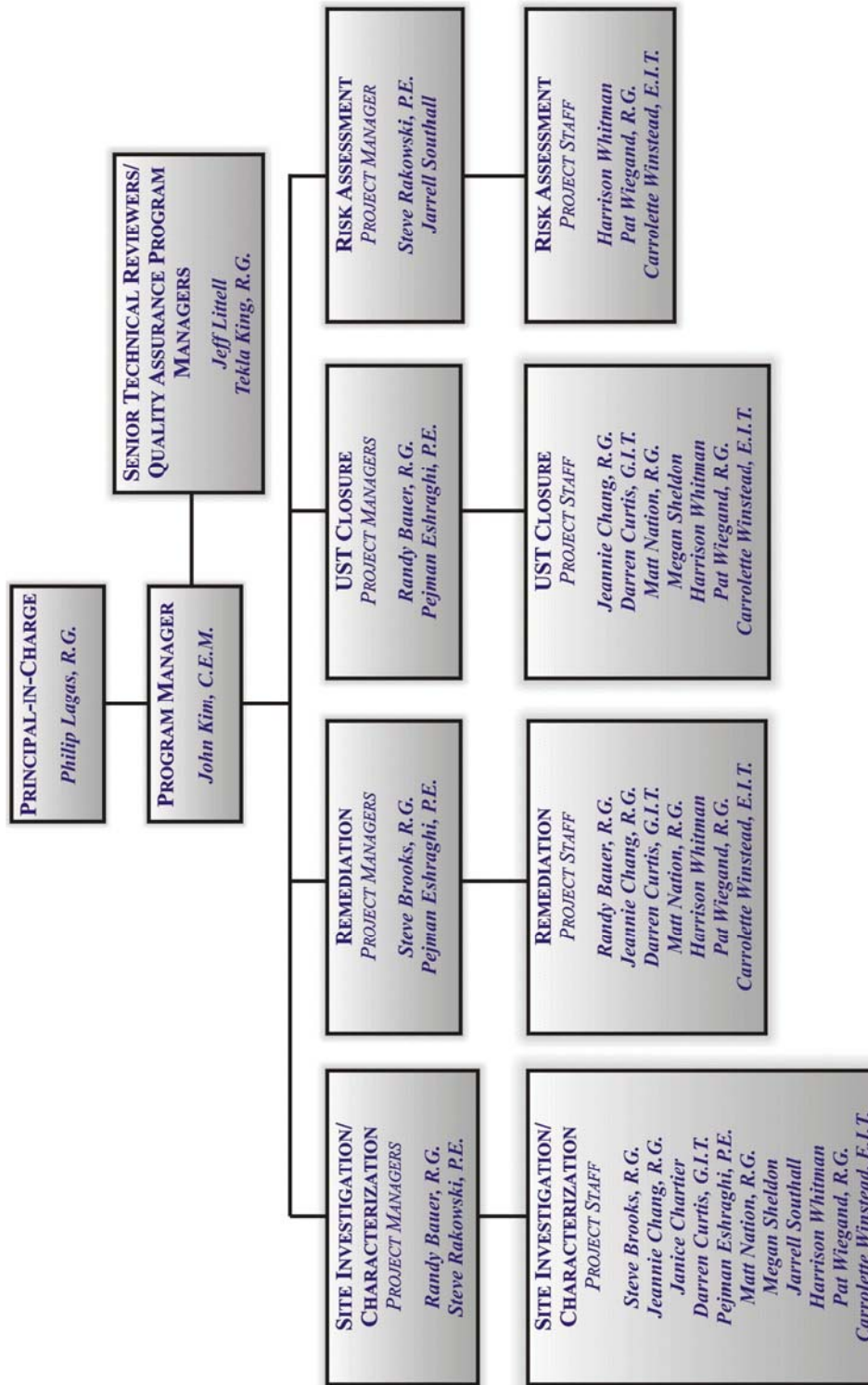
Florida Department of Environmental Protection, Tallahassee, Florida - Environmental Specialist II

Served as project manager for hazardous waste sites that qualified for state administered cleanup. Negotiated and issued task assignments to contractors for remedial activities, ensured compliance with state and federal cleanup standards, Resource Conservation and Recovery Act and Superfund requirements. Developed qualifications for State of Florida administered cleanups, priority ranking and corrective actions for facilities contaminated by drycleaning chemicals. Implemented the agency's Drycleaning Solvent Cleanup Program, reviewed applications and determined if Drycleaning facilities were eligible for state funded cleanup.

Shena Inc., Norcross, Georgia - Laboratory Manager

Built, directed, and managed scientific laboratory and operations. Researched and developed inorganic methods for Shena Analytical Systems. Installed and trained customers from Indiana Board of Health, Louisiana Agriculture Department, and City of Cincinnati Sewer District on the Shena Analytical Systems. Served as Safety Director and Hazardous Waste Coordinator. Responsible for Material Safety Data Sheets, labels, and storage of hazardous waste and chemicals.

15. Provide an organizational chart showing the staffing and lines of authority for the key persons to be used under this contract.



16. Complete the Pricing Schedule in its entirety.

Support Services	Minimum Responsibilities, Qualifications and Education	Base Hourly Rate
Support Level I (Word Processor)	Responsibilities: Clerical, word processing, filing, general administration. Qualifications: Entry level, no experience restriction. Education: No education restriction.	\$ <u>15.00</u>
Support Level II (Admin Assistant)	Responsibilities: Drafting, project manager's assistant, graphics. Qualifications: 1 - 2 years experience. Education: No education restriction.	\$ <u>50.00</u>
Support Level III (Technical)	Responsibilities: Drafting supervisor, administrator supervisor, Senior Word Processor. Qualifications: 2 - 4 years experience. Education: No education restriction.	\$ <u>57.00</u>
Field Services	Minimum Responsibilities, Qualifications and Education	Base Hourly Rate
Field Services Level I	Responsibilities: Closely supervised; conducts routine heavy labor during equipment installations; sampling/gauging, equipment maintenance. Qualifications: Entry level, 1 - 2 years of experience. Education: No education restriction.	\$ <u>15.00</u>
Field Services Level II	Responsibilities: Limited supervision; occasional heavy labor; sampling/gauging, equipment installations, operations, troubleshooting. Qualifications: 2 - 4 years of experience. Education: No education restriction.	\$ <u>55.00</u>
Field Services Level III	Responsibilities: Supervises on-site tasks such as system installations and operations, trouble shooting; technical advisor. Qualifications: 5 - 7 years of experience. Education: No education restriction.	\$ <u>58.00</u>
Field Services Staff (Field)	Responsibilities: Limited supervision; experience specific to Scope of Work, independent field work and/or specialist. Qualifications: 7 - 9 years experience/special knowledge or expertise in field. Education: No education restriction.	\$ <u>59.00</u>
Field Services Manager	Responsibilities: Overall supervision of field services staff; works with Project Managers on scheduling and coordination. Qualifications: 7 - 9 years of experience. Education: Bachelor of Science (BS) degree in applicable field of study or 15 plus years experience.	\$ <u>64.00</u>
Professional Personnel *	Minimum Responsibilities, Qualifications and Education	Base Hourly Rate
Professional Level I	Responsibilities: Close supervision, routine tasks associated with environmental projects. Qualifications: 1 - 2 years of experience. Education: Bachelor of Science (BS) degree.	\$ <u>59.00</u>
Professional Level II	Responsibilities: Collects and interprets data, report writing, provides project input. Qualifications: 2 - 4 years of experience Education: Bachelor of Science (BS) degree.	\$ <u>70.00</u>
Professional Level III (Staff)	Responsibilities: Limited supervision, independent fieldwork, oversees Professional Levels I and II. Qualifications No. 1: 4 - 6 years of experience with Bachelor of Science (BS) degree. Qualifications No. 2: 1-2 years of experience with Masters degree.	\$ <u>85.00</u>
Professional Level IV (Project)	Responsibilities: Manages projects of moderate scope, prepares cost estimates, supervises others. Qualifications No. 1: 6 - 8 years experience with Bachelor of Science (BS) degree or registration (PE or RG). Qualifications No. 2: 3 - 4 years of experience with Masters degree.	\$ <u>104.00</u>
Professional Level V (Senior)	Responsibilities: Senior technical leader for environmental projects, QA of Project Plans, report review. Qualifications: 8 or more years of experience. Education: Advanced degree in field or registration (PE or RG).	\$ <u>121.00</u>
** Must meet both the experience & education requirements **		
Professional Level VI (Principle)	Responsibilities: Recognized registered professional, resident expert, expert testimony, QA of Project Plans and report review and/or Oversees and coordinates all levels of personnel, senior technical leader and has signature authority. Qualifications No. 1: 5 or more years in field project formulation, survey, excavation and technical reporting experience. Education No. 1: Doctorate degree and registration as PE or RG or Doctorate degree in Risk Assessment or Toxicology . Qualifications No. 2: 12 or more years of experience. Education No. 2: Advanced degree in field and registration as PE or RG or Advanced degree in Risk Assessment or Toxicology. Qualifications No. 3: 20 or more years in field project formulation, survey, excavation and technical reporting experience. Education No. 3: Bachelor of Science (BS) degree in applicable field of study.	\$ <u>125.00</u>
** Must meet both the experience & education requirements **		
*	There will be multiple technical disciplines that will fall under the descriptions of each professional level. A geologist, engineer, public involvement specialist, or environmental scientist with one year environmental experience would each fall under a Professional Level I.	
Aggregate Hourly Rate Total:		\$ <u>937.00</u>

17. Complete the Rental Equipment Pricing Schedule in its entirety.			
Equipment Name	Price Per Day	Price Per Week	Price Per month
Air Sparge Compressor \leq 15psi	\$ 140. 00	\$ 275. 00	\$ 715.00
Air Sparge Compressor \geq 15psi	\$ 140. 00	\$ 275. 00	\$ 715. 00
Bladder Pump	\$ 71. 00	\$ 240. 00	\$ 710. 00
Centrifugal Pump	\$ 107. 00	\$ 275. 00	\$ 820. 00
Combustible Gas Indicator (CGI)	\$ 90. 00	\$ 270.00	\$ 800. 00
Depth Specific Sampler	\$ 30. 00	\$ 100. 00	\$ 250. 00
Disposable Bailer	\$ 10. 00	N/A	N/A
Dissolved Oxygen Meter	\$ 55. 00	\$ 150. 00	\$ 355. 00
Electric Catalytic Oxidizer \leq 250cfm	\$ 250. 00	\$ 1,000. 00	\$ 3,000. 00
Flame Ionization Detector (FID)	\$ 120. 00	\$ 355. 00	\$ 1,065. 00
Flow Through Cell	\$ 120. 00	\$ 355. 00	\$ 1,065. 00
Generator \leq 6kw	\$ 80. 00	\$ 300. 00	\$ 720. 00
Hand Auger w/Slide Hammer Sampler	\$ 40. 00	\$ 150. 00	\$ 360. 00
Interface Probe – Oil/Water	\$ 70. 00	\$ 215. 00	\$ 640. 00
Lower Explosive Limit/Oxygen Meter (LEL/O2)	\$ 60. 00	\$ 225. 00	\$ 540. 00
Peristaltic Pump	\$ 40. 00	\$ 150. 00	\$ 360. 00
Photoionization Dectector (PID)	\$ 90. 00	\$ 270. 00	\$ 800. 00
pH Temperature and Conductivity Meter	\$ 30. 00	\$ 100. 00	\$ 250. 00
Portable Flow Meter	\$ 60. 00	\$ 225. 00	\$ 540. 00
Portable Pilot Test Unit (includes trailer, anemometer, blower/compressor, vacuum/pressure gauges, pitot tubes, generator, miscellaneous fittings, power cords and plugs.			
AS Pilot Test Unit	\$ 625. 00	\$ 2,500. 00	\$ 7,500. 00
SVE Pilot Test Unit	\$ 450. 00	\$ 1,800. 00	\$ 5,400. 00
Pressure Transducer, Cable and Data Logger	\$ 50. 00	\$ 230. 00	\$ 690. 00
Submersible Pump w/Controller	\$ 120. 00	\$ 355. 00	\$ 1,065. 00
Thermal/Catalytic Oxidizer 250cfm	\$ 250. 00	\$ 1,000. 00	\$ 3,000. 00
Thermal/Catalytic Oxidizer 500 cfm	\$ 325. 00	\$ 1,300. 00	\$ 4,000. 00
Vehicle	\$ 50. 00	\$ 200. 00	\$ 700. 00
Water Level Indicator	\$ 30. 00	\$ 100. 00	\$ 250. 00

18. Use this space to provide any additional information or description of resources (including any computer design capabilities) supporting your firm's qualifications for the proposed contract.

Brown and Caldwell has been providing environmental engineering and consulting services in Arizona since 1976. The Phoenix office of Brown and Caldwell consists of 147 geologists, hydrogeologists, engineers, scientists, and technicians, and is supported by more than 1,300 personnel nationally. Brown and Caldwell has conducted over 460 underground storage tank (UST) related projects nationwide ranging from closure activities to leaking UST (LUST) correction actions.

Environmental Services. The Phoenix office provides a complete range of environmental services from investigating and remediating contaminated sites to coordinating and implementing public outreach programs. The Phoenix office consists of 48 environmental professionals who specialize in UST closure; hydrogeological evaluation and modeling; petrochemical and hazardous waste characterization; contaminant fate and transport modeling; site assessment and characterization; risk assessment; site remediation and remedial system design and feasibility analysis; treatability studies; resource evaluation; air permitting and modeling; water quality permitting; environmental and safety auditing; strategic environmental management; ISO 14001 compliance; environmental management systems design and implementation; NEPA assessments; Phase I, II and III environmental site assessments; geographic information system (GIS), design and implementation of web-based database systems; mine permitting and closure; landfill closure, design and permitting; transactional due diligence; and brownfield redevelopment. The Phoenix office is supported nationally by Brown and Caldwell staff specializing in toxicology and statistical data analysis, health and safety, industrial water quality, and vadose zone, groundwater, ecological and cultural survey assessments, and surface water modeling. Brown and Caldwell also provides a wide-range of remediation options including risk-based design-build remedial approaches. Within the state of Arizona, we are currently operating soil vapor extraction, air sparging, and free product recovery systems for a range of contaminants. Brown and Caldwell can also serve as a third-party reviewer and provide strategic review or technical support of existing remediation projects to ensure they are meeting your objectives.

UST Closure. Brown and Caldwell provides cradle to grave environmental services pertaining to UST system closure and LUST corrective action. Through establishing excellent relationships with public and private property owners as well as with regulating authorities, Brown and Caldwell is capable of performing cost-effective UST system permanent closure and site assessments while the facility is open for business. Brown and Caldwell has assembled an experienced project team and subcontractors to remove and dispose of the tanks in a safe manner and accurately assessing the site and interpret the results for closure approval.

Site Investigation/Characterization. Brown and Caldwell excels in conducting cost-effective and defensible site characterizations utilizing both intrusive and non-intrusive investigative techniques. Our experience spans a wide variety of atmospheric, aqueous, and geologic media at a substantial array of petrochemical, industrial and commercial properties. Brown and Caldwell has conducted thousands of site investigations, ranging from individual pre-acquisition assessments to complex multimedia characterizations at large industrial complexes. Regardless of the project size, Brown and Caldwell assembles the appropriate project team and characterization protocols to efficiently and cost effectively collect, analyze, and interpret a representative data set.

Remediation. Brown and Caldwell has developed an innovative approach to identifying and implementing the most efficient and appropriate remedial solutions. This approach focuses on satisfying our clients' overall business objectives while accommodating the unique hydrogeologic environment of each site. In addition to providing appropriate and cost-effective remedial solutions, Brown and Caldwell acts as a technical advocate for our clients in negotiating practical remedial goals and cleanup levels. This focus on closing the gap between practical and overly protective remedial standards has saved our clients millions of dollars on cleanup projects. On complex and multi-site projects, Brown and Caldwell works with many clients to establish and implement consistent characterization and remediation strategies, resulting in lower overall levels of effort, while accomplishing multiple objectives. Key elements of this strategy include simplifying overall program management, prioritizing projects and negotiating universal remediation goals, managing subcontractors, and helping clients reduce the overall number and effort of contractors and consultants involved in a project. Brown and Caldwell has provided design-build remedial services on a number of industrial, commercial and municipal projects. Our leadership in the application of risk-based methods, our depth of nationally recognized scientific expertise, and our in-house remedial construction expertise allows Brown and Caldwell to stand out from our competition.

Risk Assessment. Brown and Caldwell utilizes an anticipatory approach in conducting risk assessments. We identify the risks and chemical risk drivers early in the process, even before the investigation is finished. Many firms use a linear approach to risk assessment—methodically setting up assumptions and statistical calculations before a determination of risk and the chemicals that drive the risk—then this information is passed onto the engineers to make decisions on cleanup. This linear approach can become a bottle neck to reaching a solution. Brown and Caldwell uses an interactive approach in which our risk assessors identify the highest-risk scenario first and follow that to the risk drivers. Then the engineers know the risk drivers and can focus their activities early in the process. The risk assessors can then proceed with the details of a full risk assessment. It's this innovative, integrated approach that saves you time and money by immediately getting to the heart of your remediation problem. Our risk assessors identify your objectives and goals, and then identify the agencies involved and their positions. From there we determine the level of remediation effort that will meet your needs. Once the effort level is determined, we begin developing a comprehensive community outreach program to help alleviate public concern. Also, Brown and Caldwell's risk assessments increasingly include detailed evaluations to determine how contaminated soil or groundwater can affect people or wildlife in the area and the best course of action. While Brown and Caldwell has designed many innovative treatment systems, our most notable projects moved beyond conventional thinking and achieved site closure with little or no remedial construction. This method is becoming increasingly popular with regulatory agencies and requires a thorough understanding of environmental risk management and good site-specific application of engineering principles. And when remedial construction is deemed necessary, Brown and Caldwell is recognized for its risk management application for site closures, negotiating risk-based site closures on many large and complex sites nationwide.

Computer Capabilities. Brown and Caldwell invests significant financial resources in maintaining an up-to-date computer infrastructure to promote the exchange of information and use of resources. We routinely maintain large Microsoft Access databases for both State and Federal clients and provide GIS services using ARCView, including web-based applications. On several of our larger projects we have designed and provided on-going maintenance for project websites which contain an interactive data source for our clients and information for the public to access. In addition, Brown and Caldwell has full CADD capabilities and often links CADD and ARCView to provide maximum usefulness of data for our clients. Full scanning capabilities are available to our clients along with our capability to provide electronic project deliverables.

Our offices utilize a mix of Windows NT 4.0, Windows 2003, and Windows XP operating systems and the workstations are Intel-based Pentium III 600Mhz CPU with 128MB of memory or greater. As a company, Brown and Caldwell uses the Microsoft Office suite of programs (currently Office 2003), including Word, Excel and PowerPoint. We also have CorelDraw, InDesign, Adobe Illustrator and Word Perfect capabilities. Brown and Caldwell has a Wide Area Network that links our offices across the United States to allow easy communication. All project staff are linked and can communicate using Microsoft's Outlook. E-mail also facilitates communication and exchange of information between the client and subconsultants involved in the project. In addition, each office has a Local Area Network that allows for sharing of project data throughout the local office. Access to client and other websites on the internet for technical research and updating of standards is a routine process. Project files are stored and managed on a dedicated project server, separate from the mail server.